ONTARIO MINISTRY OF ENVIRONMENT
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Municipal/Industrial Strategy for Abatement (MISA)

63/95 EFFLUENT MONITORING AND EFFLUENT LIMITS – ORGANIC CHEMICAL MANUFACTURING SECTOR – O. Reg. 63/95

64/95 EFFLUENT MONITORING AND EFFLUENT LIMITS – INORGANIC CHEMICAL SECTOR – O. Reg. 64/95

214/95 EFFLUENT MONITORING AND EFFLUENT LIMITS – IRON AND STEEL MANUFACTURING SECTOR – O. Reg. 214/95

215/95 EFFLUENT MONITORING AND EFFLUENT LIMITS – ELECTRIC POWER GENERATION SECTOR – O. Reg. 215/95

537/93 EFFLUENT MONITORING AND EFFLUENT LIMITS – PETROLEUM SECTOR – O. Reg. 537/93

560/94 EFFLUENT MONITORING AND EFFLUENT LIMITS – METAL MINING SECTOR – O. Reg. 560/94

561/94 EFFLUENT MONITORING AND EFFLUENT LIMITS – INDUSTRIAL MINERALS SECTOR – O. Reg. 561/94

562/94 EFFLUENT MONITORING AND EFFLUENT LIMITS – METAL CASTING SECTOR – O. Reg. 562/94

760/93 EFFLUENT MONITORING AND EFFLUENT LIMITS – PULP AND PAPER SECTOR – O. Reg. 760/93

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MISA
Municipal/Industrial Strategy for Abatement

Municipal/Industrial Strategy for Abatement (MISA)

Like many industrialized areas, Ontario is faced with the challenge of effectively managing the presence of toxic contaminants. Industrial direct discharges represent a significant contributor to water quality impairment and a prominent source of toxics. With the signing of the 1987, 1994 and 2002 Canada/Ontario Agreement Respecting the Great Lakes Basin Ecosystem, Ontario committed to the management of persistent toxic substances. The Municipal Industrial Strategy for Abatement (MISA) program was the provincial response for addressing levels of persistent toxic substances in industrial direct discharges entering Ontario's waterways.

The MISA program, by focusing on nine industrial sectors, covered the major toxic polluters. The nine sectors are petroleum, pulp and paper, metal mining, industrial minerals, metal casting, organic chemical manufacturing, inorganic chemical, iron and steel, and electric power generation. The industrial sectoral regulations were promulgated between 1993 and 1995.

Main Features of the MISA Industrial Regulations:

The regulations include monitoring and reporting requirements which include the following features:

- For every chemical parameter in the MISA regulations there are:
  - two limits: daily (i.e., not to exceed value on any day) and monthly average
- A required monitoring frequency to demonstrate compliance with the limits
- Every effluent must not be toxic to fish and water fleas
- Each plant must prepare an annual report to be available to the public
- Each plant must submit summary quarterly reports to the ministry
- Incidents of non-compliance must be reported directly to the ministry followed by a letter.

Resources:

- PROTOCOL FOR THE SAMPLING AND ANALYSIS OF INDUSTRIAL/MUNICIPAL WASTEWATER (January 1999) [PDF] [HTML]
- PROTOCOL FOR CONDUCTING A STORM WATER CONTROL STUDY (August 1994) [PDF] [HTML]

E-Laws:

- Ontario Regulation 215/95 (Effluent Monitoring and Effluent Limits – Electric Power Generating Sector)
- Ontario Regulation 561/94 (Effluent Monitoring and Effluent Limits – Industrial Minerals Sector)
- Ontario Regulation 64/95 (Effluent Monitoring and Effluent Limits – Inorganic Chemical Manufacturing Sector)
- Ontario Regulation 214/95 (Effluent Monitoring and Effluent Limits – Iron and Steel Manufacturing Sector)
- Ontario Regulation 562/94 (Effluent Monitoring and Effluent Limits – Metal Casting Sector)
- Ontario Regulation 560/94 (Effluent Monitoring and Effluent Limits – Metal Mining Sector)
- Ontario Regulation 63/95 (Effluent Monitoring and Effluent Limits – Organic Chemical Manufacturing Sector)
- Ontario Regulation 537/93 (Effluent Monitoring and Effluent Limits – Petroleum Sector)
- Ontario Regulation 760/93 (Effluent Monitoring and Effluent Limits – Pulp and Paper Sector)

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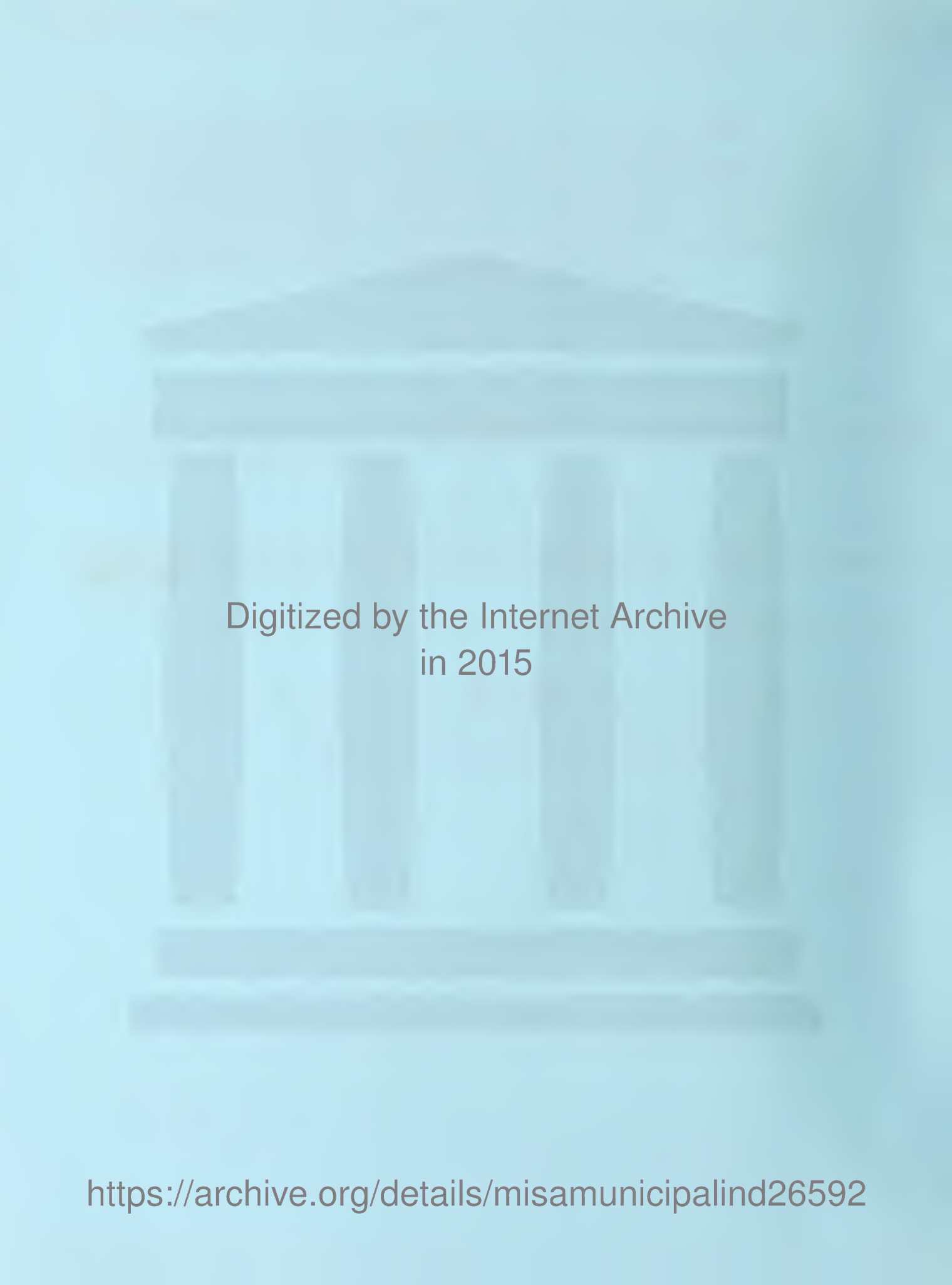
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Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 63/95

Amended to O. Reg. 50/98

EFFLUENT MONITORING AND EFFLUENT LIMITS — ORGANIC CHEMICAL MANUFACTURING SECTOR

Notice of Currency:* This document is up to date.

*This notice is usually current to within two business days of accessing this document. For more current amendment information, see the Table of Regulations (Legislative History).

This Regulation is made in English only.

PART I
GENERAL

INTERPRETATION

1. (1) In this Regulation,

"assessment parameter", in relation to a plant, means a parameter that is listed for the plant in Schedule 6;

"cooling water effluent monitoring stream" means a stream on which a sampling point is established under subsection 8 (4);

"cooling water effluent sampling point" means a sampling point established under subsection 8 (4);

"Director", in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger's plant is located and includes an alternate named by the Director;

"discharger" means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

"limited parameter",

(a) in relation to a plant named in Schedule 4, means a parameter for which a limit is specified in Column 3 of Schedule 4 for the plant, and

(b) in relation to a plant not named in Schedule 4, means a parameter for which a limit is specified in Column 3 or 4 of Schedule 2;

"merged effluent monitoring stream" means a stream on which a sampling point is established under subsection 8 (3);

"merged effluent sampling point" means a sampling point established under subsection 8 (3);

"merged parameter", in relation to a plant, means a parameter that is listed for the plant in Schedule 5;

"pick up", in relation to a sample, means pick up for the purpose of storage, including storage within an automatic sampling device, and transportation to and analysis at a laboratory;

"plant" means an industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;

"process change" means a change in equipment, production processes, process materials or treatment processes;

"process effluent batch monitoring stream" means a stream on which a sampling point is established under subsection 8 (2);

"process effluent batch sampling point" means a sampling point established under subsection 8 (2);

"process effluent monitoring stream" means a stream on which a sampling point is established under subsection 8 (1);

"process effluent sampling point" means a sampling point established under subsection 8 (1);

"process materials", in relation to a discharger's plant, means raw materials for use in an industrial process at the plant, manufacturing intermediates produced at the plant, or products or by-products of an industrial process at the plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

"quarter" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"semi-annual period" means all or part of a period of six months beginning on the first day of January or July;

"specific parameter" means 2,3,7,8-tetrachlorodibenzo-para-dioxin, 2,3,7,8-tetrachlorodibenzofuran and 2,3,7,8 substituted dioxin and furan congeners.

(2) For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(3) An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger's behalf. O. Reg. 63/95, s. 1.

PURPOSE

2. The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants listed in Schedule 1. O. Reg. 63/95, s. 2.

APPLICATION

3. (1) This Regulation applies only with respect to the plants listed in Schedule 1.

(2) This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer. O. Reg. 63/95, s. 3.

OBLIGATIONS UNDER APPROVALS, ORDERS, ETC.

4. For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 63/95, s. 4.

NON-APPLICATION OF THE GENERAL EFFLUENT MONITORING REGULATION

5. This Regulation is not a Sectoral Effluent Monitoring Regulation within the meaning of Ontario Regulation 695/88. O. Reg. 63/95, s. 5.

BY-PASSES

6. Beginning on February 16, 1998, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger's plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 63/95, s. 6.

SAMPLING AND ANALYTICAL PROCEDURES

7. (1) Each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(2) Each discharger shall maintain the sampling equipment used at the discharger's plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of each limited parameter, merged parameter, assessment parameter and specific parameter from the plant. O. Reg. 63/95, s. 7.

PART II
SAMPLING POINTS

ESTABLISHMENT AND ELIMINATION OF SAMPLING POINTS

8. (1) Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a process effluent sampling point in Schedule 2 for the discharger's plant.

(2) Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a process effluent batch sampling point in Schedule 4 for the discharger's plant.

(3) Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a merged effluent sampling point in Schedule 5 for the discharger's plant.

(4) Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a cooling water effluent sampling point in Schedule 6 for the discharger's plant.

(5) If the Director is satisfied, on the basis of written submissions from a discharger, that one or more of the circumstances described in subsection (6) exist at the discharger's plant, with the result that it is impractical to maintain or use a sampling point established at the plant under this Regulation, the Director may give the discharger written permission to eliminate the sampling point.

(6) For the purposes of subsection (5), the circumstances at the discharger's plant that might make it impractical to maintain or use a sampling point are the following:

1. A process change or redirection of or change in the character of an effluent stream has occurred or is expected to occur at the discharger's plant.

2. Equipment used for sampling or flow measurement at the sampling point is damaged or non-functional.

3. The effluent flowing in the stream on which the sampling point was established under this Regulation has been or is expected to be permanently eliminated.

(7) Where a discharger is permitted to eliminate a sampling point because of a circumstance described in paragraph 1 or 2 of subsection (6), the discharger shall, within 90 days after the day on which the sampling point is eliminated, establish a replacement sampling point.

(8) The replacement sampling point shall be established on the effluent stream from which the sampling point was eliminated, at a location approved in writing by the Director.

(9) The Director shall not approve a location for the replacement sampling point unless he or she is satisfied that monitoring at the new location would yield results that would reflect the level of discharge of each limited parameter, merged parameter and assessment parameter from the discharger's plant as reliably as did monitoring at the eliminated sampling point.

(10) A discharger who replaces a sampling point under subsection (7) has all the same obligations in connection with the replacement sampling point that the discharger had in connection with the eliminated sampling point. O. Reg. 63/95, s. 8.

Reports on Sampling Points

9. (1) By May 25, 1995, each discharger shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger's plant as of May 15, 1995.

(2) Each discharger who eliminates a sampling point at the discharger's plant under subsection 8 (5) but is not required to replace the sampling point under subsection 8 (7) shall, within 30 days after the day on which a sampling point is eliminated, give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point.

(3) Within 30 days after replacing a sampling point under subsection 8 (7), the discharger shall give the Director a written notice describing the location of the replacement sampling point, together with a revised list and plot plan showing the replacement sampling point. O. Reg. 63/95, s. 9.

Use of Sampling Points Established under This Part

10. Except as permitted or required under section 25, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 63/95, s. 10.

PART III
CALCULATION OF LOADINGS

Calculation of Loadings — General

11. (1) For the purposes of performing a calculation under sections 12, 13, 14 and 15, a discharger shall use the actual analytical result obtained by the laboratory.

(2) Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994, the discharger shall use the value zero for the purpose of performing a calculation under sections 12, 13, 14 and 15.

(3) Each discharger shall ensure that each calculation of a process effluent loading required by section 12, each calculation of a process effluent batch loading required by section 13 and each calculation of a merged effluent loading required by section 14 is performed as soon as reasonably possible after the analytical result on which the calculation is based becomes available to the discharger.

(4) Each discharger shall ensure that each calculation of a cooling water effluent loading required by section 15 is performed in time to comply with subsection 41 (4). O. Reg. 63/95, s. 11.

Calculation of Loadings — Process Effluent

12. (1) Each discharger shall calculate, in kilograms, a daily process effluent stream loading for each limited parameter in each process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 34, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily process effluent plant loading for each limited parameter for each day for which the discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1), the daily process effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily process effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average process effluent plant loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average process effluent plant loading for a parameter for a month is the arithmetic mean of the daily process effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 63/95, s. 12.

CALCULATION OF LOADINGS — PROCESS EFFLUENT — BATCH

13. (1) In addition to complying with section 12, each discharger shall calculate, in kilograms, a process effluent batch stream loading for each limited parameter in each process effluent batch monitoring stream of the discharger for each process effluent batch for which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a batch stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the batch volume of effluent, as determined under section 34, for the stream for the batch. O. Reg. 63/95, s. 13.

CALCULATION OF LOADINGS — MERGED EFFLUENT

14. (1) Each discharger shall calculate, in kilograms, a daily merged effluent stream loading for each merged parameter in each merged effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 34, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily merged effluent plant loading for each merged parameter for each day for which the discharger is required to calculate a merged effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily merged effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily merged effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily merged effluent stream loading for a parameter for a day under subsection (1), the daily merged effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily merged effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average merged effluent plant loading for each merged parameter for each month in which a sample is collected under this Regulation more than once from a merged effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average merged effluent plant loading for a parameter for a month is the arithmetic mean of the daily merged effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 63/95, s. 14.

CALCULATION OF LOADINGS — COOLING WATER

15. (1) Each discharger shall calculate, in kilograms, a daily cooling water effluent stream loading for each assessment parameter in each cooling water effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 34, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily cooling water effluent plant loading for each assessment parameter for each day for which the discharger is required to calculate a daily cooling water effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily cooling water effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily cooling water effluent stream loading for a parameter for a day under subsection (1), the daily cooling water effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily cooling water effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average cooling water effluent plant loading for each assessment parameter for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average cooling water effluent plant loading for a parameter for a month is the arithmetic mean of the daily cooling water effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 63/95, s. 15.

PART IV
PARAMETER AND LETHALITY LIMITS

PARAMETER LIMITS

16. (1) Each discharger shall ensure that each daily process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2.

(2) Each discharger shall ensure that each monthly average process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the monthly average plant loading limit specified for the parameter and the plant in Column 4 of Schedule 2.

(3) Each discharger shall ensure that each process effluent batch stream loading calculated for a parameter under section 13 in connection with the discharger's plant does not exceed the batch loading limit specified for the parameter and the plant in Column 3 of Schedule 4.

(4) Each discharger shall control the quality of each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger's plant to ensure that the concentration of 2,3,7,8-tetrachlorodibenzo-para-dioxin and the concentration of 2,3,7,8-tetrachlorodibenzofuran are both non-measurable in any sample collected at a process effluent sampling point or a process effluent batch sampling point at the plant.

(5) For the purposes of subsection (4), the concentration of 2,3,7,8-tetrachlorodibenzo-para-dioxin in a sample is non-measurable if analysis of the sample shows a concentration of 2,3,7,8-tetrachlorodibenzo-para-dioxin of less than 20 picograms per litre and the concentration of 2,3,7,8-tetrachlorodibenzofuran in a sample is non-measurable if analysis of the sample shows a concentration of 2,3,7,8-tetrachlorodibenzofuran of less than 50 picograms per litre.

(6) Each discharger shall control the quality of each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger's plant to ensure that the total toxic equivalent concentration of 2,3,7,8 substituted dioxin and furan congeners in any sample collected at a process effluent sampling point or a process effluent batch sampling point at the plant, calculated in accordance with the methods described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994, does not exceed 60 picograms per litre.

(7) Subject to subsection (8), each discharger shall control the quality of each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger's plant to ensure that the pH value of any sample collected at a process effluent sampling point or a process effluent batch sampling point at the plant is within the range of 6.0 to 9.5.

(8) Throughout any day on which a discharger has used an alternate sampling point on a process effluent monitoring stream for sampling required by section 25, as permitted by subsections 25 (7) and (8), the discharger,

(a) shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

(b) need not comply with subsection (7) with respect to the stream. O. Reg. 63/95, s. 16.

LETHALITY LIMITS

17. Each discharger shall control the quality of each stream at the discharger's plant for which a sampling point is listed in Schedule 7 to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a sampling point listed in Schedule 7 for the plant results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 63/95, s. 17.

PART V
MONITORING

MONITORING — GENERAL

18. (1) Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters, the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(2) A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(3) Subject to subsection (4), each discharger shall pick up all sets of samples required to be picked up at the discharger's plant under sections 19, 20, 21, 23 and 32 between the hours of 7 a.m. and 10 a.m.

(4) If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger's plant are such that it would be impractical to pick up a set of samples from each sampling point established at the plant under this Regulation within the time period specified in subsection (3), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (3).

(5) Subject to subsections (6) and (7), where a discharger is required by section 19, 20, 21, 23 or 32 to pick up a set of samples the discharger shall pick up a set collected over the 24-hour period immediately preceding the pick-up.

(6) The 24-hour period referred to in subsection (5) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (3) or of a different three-hour period specified in a notice under subsection (4).

(7) Where a notice has been given under subsection (4) in respect of a plant specifying a time period longer than three hours, the 24-hour period referred to in subsection (5) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(8) If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (4) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (4) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 63/95, s. 18.

MONITORING — PROCESS EFFLUENT — DAILY

19. (1) Each discharger shall, on each day, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is daily.

(2) A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an "x" in the column for that sampling point in Schedule 3.

(3) A discharger is relieved of the obligations under subsection (1) relating to a parameter and shall instead, on three days in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and analyze each set of samples for the parameter where,

(a) the discharger has performed monitoring under subsection (1) for 12 consecutive months; and

(b) the monthly average process effluent plant loading for the parameter, for each of the 12 months, as calculated under subsection 12 (6), is equal to or less than 75 per cent of the monthly average plant loading limit for the parameter as set out in Column 4 of Schedule 2 for the discharger's plant.

(4) There shall be an interval of at least 24 hours between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a week shall be picked up on the same three days in the week.

(6) Subsection (3) ceases to apply in relation to a parameter and a discharger shall instead comply with the requirements of subsection (1) in relation to the parameter where, during any 12 consecutive months,

(a) a daily process effluent plant loading for the parameter, as calculated under subsection 12 (3), exceeds the daily plant loading limit for the parameter as set out in Column 3 of Schedule 2 for the discharger's plant, on any three occasions; or

(b) a monthly average process effluent plant loading for the parameter, as calculated under subsection 12 (6), exceeds the monthly average plant loading limit as set out in Column 4 of Schedule 2 for the discharger's plant, on any two occasions.

(7) A discharger shall notify the Director in writing of any change in the frequency of monitoring under this section at the discharger's plant within 30 days after the day on which the change occurs.

(8) A discharger need not meet the requirements of subsection (1) where it is impossible to do so because of sampling by a provincial officer. O. Reg. 63/95, s. 19.

MONITORING — PROCESS EFFLUENT — WEEKLY

20. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly.

(2) A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an "x" in the column for that sampling point in Schedule 3.

(3) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 63/95, s. 20.

MONITORING — PROCESS EFFLUENT — QUARTERLY

21. (1) Each discharger shall, on one day in each quarter, on a day on which samples are picked up at the plant under subsection 20 (1), pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is quarterly.

(2) A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an "x" in the column for that sampling point in Schedule 3.

(3) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a quarter shall be picked up on the same day in the quarter. O. Reg. 63/95, s. 21.

MONITORING — PROCESS EFFLUENT — BATCH

22. (1) Each discharger shall, each time a batch of effluent flows past a process effluent batch sampling point at the discharger's plant, pick up a set of samples collected at the sampling point and shall analyze the set of samples for the parameters listed in Column 1 of Schedule 4 for the discharger's plant.

(2) Where a discharger is required by subsection (1) to pick up a set of samples collected at a process effluent batch sampling point, the discharger shall pick up a set collected throughout the period during which the batch flowed past the sampling point. O. Reg. 63/95, s. 22.

MONITORING — MERGED EFFLUENT — WEEKLY

23. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each merged effluent sampling point at the plant and shall analyze each set of samples for the parameters listed in Column 1 of Schedule 5 for the discharger's plant.

(2) All samples collected and picked up at a plant under subsection (1) shall be collected and picked up on a day on which samples are picked up at the plant under subsection 20 (1) or, in a month in which no samples are picked up at the plant under subsection 20 (1), on a day on which samples are picked up at the plant under subsection 22 (1). O. Reg. 63/95, s. 23.

MONITORING — PROCESS EFFLUENT — QUALITY CONTROL

24. (1) On one day in each year after 1995, on a day on which samples are picked up at the plant under subsection 20 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 20 (1) at one process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly or quarterly.

(2) Despite subsection (1), a discharger need not analyse any sample under subsection (1) for 2,3,7,8-tetrachlorodibenzo-para-dioxin, 2,3,7,8-tetrachlorodibenzofuran or 2,3,7,8 substituted dioxin and furan congeners.

(3) Each discharger shall prepare a travelling blank and a travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(4) There shall be an interval of at least six months between successive pick-up days at the plant under subsection (1). O. Reg. 63/95, s. 24.

MONITORING — PROCESS EFFLUENT — pH MEASUREMENT

25. (1) Each discharger shall, on each day, during the time period applicable to the plant under subsection 18 (3) or (4), collect a grab sample from each process effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH.

(2) Each discharger shall, within each 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) on each day, collect two more grab samples from each process effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH.

(3) There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a sampling point, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each

day during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection in each day.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period.

(7) For the purposes of subsections (1) to (6), a discharger shall use either the sampling point established under subsection 8 (1) on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(8) Before using an alternate sampling point under subsection (7), a discharger shall give the Director,

(a) a written notice that,

(i) sets out the name of the alternate sampling point,

(ii) describes its location, and

(iii) assigns a number to it; and

(b) a revised version of the list and plot plan submitted under section 9 showing the alternate sampling point.

(9) Each discharger shall, each time a batch of effluent flows past a process effluent batch sampling point at the discharger's plant, collect three grab samples from the sampling point and shall analyze each sample for the parameter pH.

(10) Where a discharger is required by subsection (9) to collect three grab samples in respect of a batch of effluent, the discharger shall make every reasonable effort to ensure,

(a) that the first grab sample is collected as soon as possible after the batch begins to flow past the sampling point;

(b) that the third grab sample is collected as little before the batch ceases to flow past the sampling point as possible; and

(c) that the interval between the collection of the first and second grab samples is as equal as possible to the interval between the collection of the second and third grab samples. O. Reg. 63/95, s. 25.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

26. (1) Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", dated July, 1990.

(2) Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) On one day in each month, each discharger shall collect and immediately pick up a grab sample at each process effluent sampling point listed in Schedule 7 for the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(4) All samples collected and picked up at a plant under subsection (3) shall be collected and picked up on a day on which samples are picked up at the plant under subsection 20 (1) or, in a month in which no samples are picked up at the plant under subsection 20 (1), on a day on which samples are picked up at the plant under section 21.

(5) There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (3).

(6) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(7) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(8) Samples picked up at a plant under subsection (7) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(9) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (7) shall be picked up on a day on which samples are picked up at the plant under subsection 20 (1).

(10) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (7).

(11) All samples picked up under subsection (7) in a quarter shall be picked up on the same day in the quarter.

(12) If a rainbow trout acute lethality test performed under subsection (7) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (7) to (11) cease to apply in relation to samples from that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further 12 consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

(13) A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger's plant, within 30 days after the day on which the change begins. O. Reg. 63/95, s. 26 (1-13).

(14), (15) REVOKED: O. Reg. 63/95, s. 26 (16).

(16) SPENT: O. Reg. 63/95, s. 26 (16).

(17) Subsections (2) to (16) apply with necessary modifications to each process effluent batch sampling point listed in Schedule 7 for the discharger's plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 7 shall be deemed to be a reference to each process effluent batch sampling point listed in Schedule 7 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to subsection 22 (1).

(18) Subsections (2) to (16) apply with necessary modifications to each merged effluent sampling point listed in Schedule 7 for the discharger's plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 7 shall be deemed to be a reference to each merged effluent sampling point listed in Schedule 7 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to subsection 23 (1).

(19) Subsections (2) to (13) apply with necessary modifications to each cooling water effluent sampling point listed in Schedule 7 for the discharger's plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 7 shall be deemed to be a reference to each cooling water effluent sampling point listed in Schedule 7 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to section 32. O. Reg. 63/95, s. 26 (17-19).

MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

27. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*", dated July, 1990.

(2) Subsections 26 (2) to (19) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna*.

(3) Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger's plant under this section on a day on which the discharger collects a sample from the sampling point under section 26, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 26. O. Reg. 63/95, s. 27.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT — SAMPLING POINTS LISTED IN SCHEDULE 8

28. (1) Beginning on February 16, 1998, on one day in each month, on a day on which samples are picked up at the plant under section 23, each discharger shall collect and immediately pick up a grab sample at each sampling point that is listed in Schedule 8 for the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(2) Subsections 26 (1) and (2) apply with necessary modifications to each sample picked up at the discharger's plant under subsection (1).

(3) There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a month shall be picked up on the same day in the month.

(5) Where a discharger has performed tests under subsection (1) for 12 consecutive months on samples collected from the same sampling point, the discharger is relieved of the obligations under subsection (1) relating to the sampling point and shall instead, on one day in each quarter, on a day on which samples are picked up at the plant under section 23, collect and immediately pick up a grab sample at the sampling point and perform a rainbow trout acute lethality test on each sample.

(6) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (5).

(7) All samples picked up under subsection (5) in a quarter shall be picked up on the same day in the quarter. O. Reg. 63/95, s. 28.

MONITORING — ACUTE LETHALITY — *DAPHNIA MAGNA* — SAMPLING POINTS LISTED IN SCHEDULE 8

29. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*", dated July, 1990.

(2) Each *Daphnia magna* acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) Beginning on February 16, 1998, on one day in each month, on a day on which samples are picked up at the plant under section 23, each discharger shall collect and immediately pick up a grab sample at each sampling point that is listed in Schedule 8 for the discharger's plant and shall perform a *Daphnia magna* acute lethality test on each sample.

(4) There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(6) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a *Daphnia magna* acute lethality test on each sample.

(7) Samples picked up at a plant under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(8) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (6) shall be picked up on a day on which samples are picked up at the plant under section 23.

(9) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (6).

(10) All samples picked up under subsection (6) in a quarter shall be picked up on the same day in the quarter. O. Reg. 63/95, s. 29.

MONITORING — ACUTE LETHALITY — TOXICITY ELIMINATION REPORTS

30. (1) If three consecutive rainbow trout acute lethality tests performed under subsection 28 (1) or (5) or under a combination of subsections 28 (1) and (5) on samples picked up at a sampling point result in the mortality of more than 50 per cent of the test rainbow trout, the discharger shall submit to the Director a toxicity elimination report with respect to the stream on which the sampling point is located.

(2) A toxicity elimination report with respect to the stream on which the sampling point is located shall set out the following information:

1. A detailed analysis of the causes and sources of the mortality of more than 50 per cent of the test rainbow trout at the sampling point.
2. A synopsis of any studies conducted to support the analysis.
3. A detailed description of the methods by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.
4. An evaluation of the technical feasibility of implementing, at the discharger's plant, each method described under paragraph 3 and a statement of which of the methods are technically feasible.
5. An estimate of the financial cost to the discharger of implementing each method identified as technically feasible under paragraph 3.

(3) Where a discharger is required by subsection (1) to submit a toxicity elimination report to the Director, the discharger shall submit the report to the Director no later than 12 months after the day on which the third of three consecutive rainbow trout acute lethality tests was performed that resulted in the mortality of more than 50 per cent of the test rainbow trout at the sampling point on the stream.

(4) In addition, where a discharger is required by subsection (1) to submit a toxicity elimination report with respect to a stream, the discharger shall submit to the Director annual toxicity elimination progress reports with respect to the stream, no later than the anniversary of the day on which the toxicity elimination report with respect to the stream was required to be submitted under subsection (3).

(5) A toxicity elimination progress report with respect to a stream shall set out the following information:

1. A detailed description of any methods, in addition to those described under paragraph 3 of subsection (2) with respect to the stream, by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.
2. An evaluation of the technical feasibility of implementing, at the discharger's plant, each method described under paragraph 1 and a statement of which of the methods are technically feasible.
3. An estimate of the financial cost to the discharger of implementing each method identified as technically feasible under paragraph 2.

(6) Where a discharger has performed three consecutive quarterly tests under subsection 28 (5) on samples collected from a stream in relation to which the discharger has obligations under subsection (4) and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (4) in relation to that stream.

(7) Where a discharger has been relieved by subsection (6) of the obligation to submit toxicity elimination progress reports in relation to a stream and three consecutive quarterly tests under subsection 28 (5) on samples collected from that stream result in the mortality of more than 50 per cent of the test rainbow trout, subsection (6) ceases to apply and the discharger shall instead comply with the requirements of subsection (4) relating to the stream, until a further three consecutive quarterly tests under subsection 28 (5) on samples collected from the stream result in mortality for no more than 50 per cent of the rainbow trout in each test.

(8) Subsections (1) to (7) apply with necessary modifications to *Daphnia magna* acute lethality tests performed under section 29 and, for the purpose,

(a) a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna*; and

(b) a reference to subsection 28 (1) shall be deemed to be a reference to subsection 29 (3) and a reference to subsection 28 (5) shall be deemed to be a reference to subsection 29 (6). O. Reg. 63/95, s. 30.

MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

31. (1) Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", dated February, 1992.

(2) Where a discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*", dated February, 1992.

(3) On one day in each semi-annual period, on a day on which samples are picked up at the plant under section 20 or, in a semi-annual period in which no samples are picked up at the plant under section 20, on a day on which samples are picked up at the plant under section 22, each discharger shall collect and immediately pick up a grab sample from each sampling point listed in Schedule 9 for the discharger's plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

(4) There shall be an interval of at least 90 days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a semi-annual period shall be picked up on the same day in the semi-annual period.

(6) A discharger need not collect a sample from a sampling point in accordance with subsection (3) until 12 consecutive monthly rainbow trout acute lethality tests and 12 consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at a discharger's plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 63/95, s. 31.

MONITORING — COOLING WATER EFFLUENT — WEEKLY ASSESSMENT

32. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each cooling water effluent sampling point at the plant and shall analyze each set of samples for the parameters listed in Column 1 of Schedule 6 for the discharger's plant.

(2) All samples picked up at a plant under subsection (1) shall be picked up,

(a) on the day on which samples are picked up at the plant under section 20;

(b) in a week in which no samples are picked up at the plant under section 20, on a day on which samples are picked up at the plant under section 22; or

(c) in a week in which no samples are picked up at the plant under section 20 or 22, on any day in the week.

(3) There shall be an interval of at least four days between successive pick-up days at the plant under clause (2) (c).

(4) All samples picked up under clause (2) (c) in a week shall be picked up on the same day in the week. O. Reg. 522/95, s. 1.

MONITORING — MERGED EFFLUENT — pH AND SPECIFIC CONDUCTANCE MEASUREMENT

33. (1) Each discharger shall, on one day in each week, on the day on which samples are picked up at the plant under section 20 or, in a week in which no samples are picked up at the plant under section 20, on a day on which samples are picked up at the plant under section 22, during the time period applicable to the plant under subsection 18 (3) or (4), collect a grab sample from each merged effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(2) Within the 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) in each week, the discharger shall collect two more grab samples from each merged effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(3) There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH and the parameter specific conductance on one day in each week, on the day on which samples are picked up at the plant under subsection 20

(1), during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection for the week.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period. O. Reg. 63/95, s. 33 (1-6).

(7) REVOKED: O. Reg. 522/95, s. 2 (2).

MONITORING — COOLING WATER EFFLUENT — pH AND SPECIFIC CONDUCTANCE MEASUREMENT

33.1 (1) Each discharger shall, on one day in each week, on the day on which samples are picked up at the plant under section 32, during the time period applicable to the plant under subsection 18 (3) or (4), collect a grab sample from each cooling water effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(2) Within the 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) in each week, the discharger shall collect two more grab samples from each cooling water effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(3) There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH and the parameter specific conductance on one day in each week, on the day on which samples are picked up at the plant under section 32, during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection for the week.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period. O. Reg. 522/95, s. 3.

PART VI
EFFLUENT VOLUME

FLOW MEASUREMENT

34. (1) Subject to subsection (6), for the purposes of this section, a volume of effluent for a stream for a day is the volume that flowed past the sampling point established under section 8 on the stream during the 24-hour period preceding the pick-up of the first sample picked up from the stream for the day.

(2) Each discharger shall determine in cubic metres a daily volume of effluent for each process effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(3) Despite subsection (2), where a process effluent monitoring stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of the individual intermittent volume measurements.

(4) Each discharger shall use flow measurement methods that allow the daily volumes for process effluent monitoring streams to be determined to an accuracy of within plus or minus 15 per cent.

(5) Each discharger shall determine in cubic metres a batch volume of effluent for each process effluent batch monitoring stream at the discharger's plant, for each batch of effluent for which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(6) For the purposes of subsection (5), a batch volume of effluent for a process effluent batch monitoring stream for a batch is the volume of effluent that flows past the process effluent batch sampling point established under section 8 on the stream throughout the period of flow of the batch.

(7) Each discharger shall use flow measurement methods that allow the batch volumes for process effluent batch monitoring streams to be determined to an accuracy of within plus or minus 15 per cent.

(8) Each discharger shall determine in cubic metres a daily volume of effluent for each merged effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(9) Each discharger shall use flow measurement methods that allow the daily volumes for merged effluent monitoring streams to be determined to an accuracy of within plus or minus 20 per cent.

(10) Each discharger shall determine in cubic metres a daily volume of effluent for each cooling water effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(11) Each discharger shall use flow measurement methods that allow the daily volumes for cooling water effluent monitoring streams to be determined to an accuracy of within plus or minus 20 per cent.

(12) Each discharger shall, no later than the day that this section comes into force, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that,

(a) each flow measurement method used under subsections (2) and (3) meets the accuracy requirements of subsection (4);

(b) each flow measurement method used under subsection (5) meets the accuracy requirements of subsection (7);

(c) each flow measurement method used under subsection (8) meets the accuracy requirements of subsection (9); and

(d) each flow measurement method used under subsection (10) meets the accuracy requirements of subsection (11).

(13) Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsection (4), (7), (9) or (11), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(14) Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger's plant and shall maintain each flow measurement system according to good operating practices.

(15) Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 63/95, s. 34.

CALCULATION OF PLANT VOLUMES

35. (1) Each discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

(2) For the purposes of subsection (1), a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under section 34 for the day.

(3) Each discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) for the month.

(4) Each discharger shall calculate, in cubic metres, a daily merged effluent plant volume for each day.

(5) For the purposes of subsection (4), a merged effluent plant volume for a day is the sum of the daily merged effluent volumes determined under section 34 for the day.

(6) Each discharger shall calculate, in cubic metres, a monthly average merged effluent plant volume for each month, by taking the arithmetic mean of the daily merged effluent plant volumes calculated under subsection (4) for the month.

(7) Each discharger shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.

(8) For the purposes of subsection (7), a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under section 34 for the day.

(9) Each discharger shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection (7) for the month. O. Reg. 63/95, s. 35.

PART VII
STORM WATER CONTROL

STORM WATER CONTROL STUDY

36. (1) Each discharger shall complete a storm water control study in respect of the discharger's plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994. O. Reg. 63/95, s. 36 (1).

(1.1) Despite subsection (1), the requirements in respect of parameters for analysis required for process effluent and cooling water effluent, set out at page 5 of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994 do not apply in relation to the following plants:

1. Cornwall Chemicals Limited.
2. Nova Chemicals Canada Ltd. (Sarnia).
3. Oxychem Durez Canada.
4. RohMax Canada (West Hill).

(1.2) For the purposes of subsection (1), each discharger for Cornwall Chemicals Limited, Nova Chemicals Canada Ltd. (Sarnia), Oxychem Durez Canada and RohMax Canada (West Hill) shall complete a storm water control study using the parameters set out in Column 1 of Schedule 10 for the discharger's plant. O. Reg. 50/98, s. 1 (1).

(2) A discharger need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994; and

(b) the discharger notifies the Director in writing, by February 15, 1996, that the plant meets the exemption criteria referred to in clause (a). O. Reg. 63/95, s. 36 (2).

(3) Subject to subsections (4) and (4.1), a discharger shall complete the storm water control study in respect of the discharger's plant by February 17, 1997. O. Reg. 63/95, s. 36 (3); O. Reg. 50/98, s. 1 (2).

(4) A discharger may postpone completion of the storm water control study in respect of the discharger's plant until February 15, 1999 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, by February 17, 1997, of the plans referred to in clause (a). O. Reg. 63/95, s. 36 (4).

(4.1) Each discharger for Cornwall Chemicals Limited, Nova Chemicals Canada Ltd. (Sarnia) and RohMax Canada (West Hill) shall complete the storm water control study by February 15, 1999. O. Reg. 50/98, s. 1 (3).

(5) Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger's plant, on request during the plant's normal office hours. O. Reg. 63/95, s. 36 (5).

PART VIII
RECORDS AND REPORTS

RECORD KEEPING

37. (1) Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 19 to 23, 25, 32, 33 and 33.1, all calculations performed under sections 12 to 15, and all determinations and calculations made or performed under sections 34 and 35. O. Reg. 63/95, s. 37 (1); O. Reg. 522/95, s. 5 (1).

(2) Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 7, including, for each sample, the date, the time of pick-up, the sampling procedures used and any incidents likely to affect the analytical results.

(3) Each discharger shall keep records of the results of all monitoring performed under sections 24, 26, 27 and 31.

(4) Each discharger shall keep records of all maintenance and calibration procedures performed under section 34.

(5) Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction and including a description of any remedial action taken.

(6) Each discharger shall keep records of any incident in which effluent that would ordinarily flow past a sampling point established under this Regulation is discharged from the discharger's plant without flowing past that sampling point, stating the date, duration, cause and nature of each incident.

(7) Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger's plant. O. Reg. 63/95, s. 37 (2-7).

(8) Beginning on March 1, 1995, each discharger shall calculate and keep records of the reference daily rate of production, in tonnes, for each material listed in Schedule 11 for the discharger's plant. O. Reg. 63/95, s. 37 (8); O. Reg. 522/95, s. 5 (2).

(9) Beginning on March 1, 1995, each discharger shall calculate and keep records of monthly average daily production, in tonnes, of each material listed in Schedule 11 for the discharger's plant, for each month. O. Reg. 63/95, s. 37 (9); O. Reg. 522/95, s. 5 (3).

(10) For the purposes of subsection (9), the monthly average daily production of a material for a month at the discharger's plant is the amount of the material, calculated in tonnes, that is produced at the discharger's plant during the month, divided by the number of days in the month.

(11) For the purposes of subsection (8), the reference daily rate of production for a material at the discharger's plant is the arithmetic mean of the amounts calculated under subsection (9) for the material for the first 12 months for which the discharger is required to keep a record for the material under subsection (9).

(12) Subject to subsection (13), each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(13) Each discharger shall keep each record required by subsections (8) and (9) for a period of 10 years.

(14) Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger's plant, on request during the plant's normal office hours. O. Reg. 63/95, s. 37 (10-14).

REPORTS AVAILABLE TO THE PUBLIC

38. (1) On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of plant loadings calculated under sections 12 to 15;

(b) a summary of batch stream loadings calculated under section 13;

(c) a summary of the results of monitoring performed under sections 19 to 23, 25 to 27 and 31 to 33.1;

(d) a summary of calculations performed under subsections 35 (1), (4) and (7);

(e) a summary of the loadings or other results that exceeded a limit under section 16 or 17; and

(f) a summary of the incidents in which effluent that would ordinarily flow past a sampling point established under this Regulation is discharged from the discharger's plant without flowing past that sampling point. O. Reg. 63/95, s. 38 (1); O. Reg. 522/95, s. 6.

(2) Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger's plant, on request, during the plant's normal office hours.

(3) Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1).

(4) Each discharger shall ensure that each report prepared under section 30 is availabe to any person at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 63/95, s. 38 (2-4).

REPORTS TO THE DIRECTOR — GENERAL

39. (1) Each discharger shall notify the Director in writing of any change of name or ownership of the discharger's plant occurring after February 14, 1995, within 30 days after the end of the month in which the change occurs.

(2) Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger's plant, within 30 days of the change or redirection.

(3) A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week's duration. O. Reg. 63/95, s. 39 (1-3).

(4) Each discharger shall notify the Director in writing if the discharger's plant has, for 90 consecutive days, produced a material listed in Schedule 11 for the discharger's plant at less than 75 per cent of the reference daily rate of production calculated under subsection 37 (8) for the material, within 30 days of the end of the 90-day period. O. Reg. 63/95, s. 39 (4); O. Reg. 522/95, s. 7.

REPORTS TO THE DIRECTOR — COMPLIANCE WITH SECTION 6 AND PART IV

40. (1) Each discharger shall report to the Director any incident in which effluent that would ordinarily flow past a point established under this Regulation is discharged from the discharger's plant without flowing past that sampling point.

(2) Each discharger shall report to the Director any loading or other result that exceeds a limit prescribed by section 16 or 17.

(3) A report required under subsection (1) or (2) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 63/95, s. 40.

QUARTERLY REPORTS TO THE DIRECTOR

41. (1) No later than 45 days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger's plant throughout the quarter as required by subsections (3) to (8).

(2) A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format and signed by the discharger.

(3) A report under this section shall include all information included in a report given under section 40 during the quarter.

(4) Each discharger shall report, for each month in the quarter,

(a) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 12 for each limited parameter;

(b) the highest and lowest batch stream loadings calculated under section 13 for each limited parameter;

(c) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 14 for each merged parameter;

(d) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 15 for each assessment parameter.

(5) Each discharger shall report, for each month in the quarter,

(a) the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under section 35;

(b) the highest and lowest process effluent batch volumes calculated under subsection 34 (5);

(c) the monthly average merged effluent plant volume and the highest and lowest daily merged effluent plant volumes calculated under section 35; and

(d) the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under section 35.

(6) Each discharger shall, for each sampling point established under this Regulation at the discharger's plant, report the number of days in each month in the quarter on which effluent flowed past the sampling point. O. Reg. 63/95, s. 41 (1-6).

(6.1) Each discharger shall, for each process effluent batch sampling point established under this Regulation at the discharger's plant, report the number of times in each month in the quarter on which effluent flowed past the sampling point. O. Reg. 522/95, s. 8 (1).

(7) Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 25 for each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger's plant. O. Reg. 63/95, s. 41 (7).

(8) Each discharger shall report, for each month in the quarter, the highest and lowest pH results and the highest and lowest specific conductance results obtained under,

(a) section 33 for each merged effluent monitoring stream at the discharger's plant; and

(b) section 33.1 for each cooling water effluent monitoring stream at the discharger's plant.

(9) Each discharger shall report, for each quarter, the results obtained under subsection 21 (1) in respect of each specific parameter for each process effluent sampling point at the discharger's plant. O. Reg. 522/95, s. 8 (2).

REPORTS TO THE DIRECTOR — CHRONIC TOXICITY TESTING

42. (1) Each discharger shall report to the Director the results of all monitoring performed under section 31, together with the date on which each sample was picked up, no later than 60 days after the end of each semi-annual period in which the monitoring was performed.

(2) A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 63/95, s. 42.

43. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 63/95, s. 43.

44. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 63/95, s. 44.

SCHEDULE 1
LIST OF REGULATED PLANTS

Plant name	Location	Owner as of January 1, 1998
Amoco Canada Petroleum Company Limited (formerly: Amoco Canada Resources Ltd.)	Sarnia	Amoco Canada Petroleum Company Ltd.
BASF Canada Inc.	Arnprior	BASF Canada Inc.
Bayer Inc. (Formerly: Bayer Rubber Inc.)	Sarnia	Bayer Inc.
Celanese Canada Inc.	Millhaven	Celanese Canada Inc.
Chinook Group Limited	Sombra	Chinook Group Limited
Cornwall Chemicals Limited	Cornwall	Cornwall Chemicals Ltd.
Dow Chemical Canada Inc. — LaSalle Road	Sarnia	Dow Chemical Canada Inc.
Dow Chemical Canada Inc. — Scott Road	Sarnia	Dow Chemical Canada Inc.
Dow Chemical Canada Inc. — Vidal Street	Sarnia	Dow Chemical Canada Inc.
Dupont Canada Inc.	Kingston	Dupont Canada Inc.
Dupont Canada Inc.	Maitland	Dupont Canada Inc.
Dupont Canada Inc.	Whitby	Dupont Canada Inc.
Ethyl Canada Inc.	Sarnia	Ethyl Canada Inc.
GE Plastics Canada	Cobourg	General Electric Canada Inc.
Geon Canada Inc.	Niagara Falls	Geon Canada Inc.
Goodyear Canada Inc.	Bowmanville	Goodyear Canada Inc.
Imperial Oil Chemicals Division	Sarnia	Imperial Oil Limited
Morbern Inc.	Cornwall	Morbern Inc.

Nova Chemicals Canada Ltd (formerly: Novacor Chemicals Ltd.)	Corunna	Novacor Chemicals Canada Ltd.
Nova Chemicals Canada Ltd (formerly: Novacor Chemicals Ltd.)	Mooretown	Novacor Chemicals Canada Ltd.
Nova Chemicals Canada Ltd (formerly: Novacor Chemicals Ltd., Petrochemicals Division)	Sarnia	Novacor Chemicals Canada Ltd.
OxyChem Durez Canada	Fort Erie	OxyChem Durez Holding Company Ltd.
RohMax Canada — Morrisburg plant (formerly:Rohm and Haas Canada Inc.)	Morrisburg	RohMax Canada
RohMax Canada — West Hill plant (formerly: Rohm and Haas Canada Inc.	West Hill	RohMax Canada
Stepan Canada Inc.	Longford Mills	Stepan Canada Inc.
Uniroyal Chemical Ltd.	Elmira	Uniroyal Chemical Ltd.

O. Reg. 50/98, s. 2.

SCHEDULE 2
PROCESS EFFLUENT: DESIGNATED SAMPLING POINTS, LIMITS

PLANT: Amoco Canada Petroleum Company Limited (Sarnia)

Designated Process Effluent Sampling Point:
0100, API Separator Effluent to River

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	D	9.0	3.0
6	Total phosphorus	W	1.2	0.41
8	Total suspended solids	D	17	3.7
9	Aluminum	Q	1.1	-
9	Copper	Q	0.21	-
9	Molybdenum	W	0.38	0.16
9	Zinc	Q	0.17	-
10	Arsenic	Q	0.011	-
12	Mercury	Q	0.0010	-
14	Phenolics (4AAP)	W	0.0067	0.0023
15	Sulphide	W	0.12	0.044
16	1,2-Dichlorobenzene	W	0.16	0.056
17	Benzene	W	0.013	0.0051
25	Oil and grease	W	6.0	4.7

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

Plant: Bayer Inc. (Sarnia)

Designated Process Effluent Sampling Points:
0900, Butyl II Effluent to 66 inch Sewer to River
1300, Butyl Holdup Pond to River
1700, Neutralization Sump to River
1800, Biox Plant Effluent to River

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	264	92
4b	Nitrate + Nitrite	W	390	142
4a	Total Kjeldahl nitrogen	D	230	67
5a	DOC	D	1145	447
6	Total phosphorus	W	69	26
8	Total suspended solids	D	1639	540
9	Aluminum	W	170	57
9	Cobalt	W	0.40	0.28
9	Zinc	W	15	4.9
14	Phenolics (4AAP)	W	0.66	0.27
16	Bromoform	W	1.2	0.37

16	Bromomethane	D	1.4	0.32
16	Chloroform	W	1.2	0.39
16	Chloromethane	D	2.1	0.60
16	Methylene chloride	Q	0.21	-
17	Benzene	W	0.39	0.14
25	Oil and grease	W	251	126

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

Plant: Celanese Canada Inc. (Millhaven)				
Designated Process Effluent Sampling Point: 0400, Treatment Plant Effluent to Centre Outfall				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	55	20
4b	Nitrate + Nitrite	W	110	41
4a	Total Kjeldahl nitrogen	D	54	16
5a	DOC	D	57	31
6	Total phosphorus	W	23	8.5
8	Total suspended solids	D	130	39
10	Antimony	W	1.5	0.53
14	Phenolics (4AAP)	W	0.032	0.0080
25	Oil and grease	W	42	14

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Chinook Group Limited (Sombra)				
Designated Process Effluent Sampling Point: 0100, Sump Effluent to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	1.5	0.48
4b	Total Kjeldahl nitrogen	D	3.1	1.1
5a	DOC	D	8.2	3.2
6	Total phosphorus	W	0.52	0.20
8	Total suspended solids	D	7.5	2.4
9	Chromium	W	0.021	0.0079
9	Zinc	W	0.066	0.023
25	Oil and grease	W	0.90	0.34
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Dow Chemical Canada Inc. (Sarnia) — Scott Road				
Designated Process Effluent Sampling Point: 2100, Scott Road Treated Runoff to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Total Kjeldahl Nitrogen	W	1.7	0.62
5a	DOC	D	27	6.1
6	Total phosphorus	W	0.14	0.053
8	Total suspended solids	W	2.6	1.3
9	Aluminum	Q	0.022	-
9	Boron	Q	1.7	-
12	Mercury	Q	0.000042	-
14	Phenolics (4AAP)	W	0.0062	0.0023
15	Sulphide	Q	0.010	-
16	1,1,2-Trichloroethane	W	0.021	0.0065
16	1,1-Dichloroethane	W	0.047	0.015
23	1,2,4-Trichlorobenzene	W	0.0030	0.0011
23	2,4,5-Trichlorotoluene	W	0.00043	0.00020
23	Hexachlorobenzene	Q	0.00010	-
23	Hexachlorobutadiene	W	0.00028	0.00020
23	Hexachloroethane	W	0.00028	0.00020
23	Octachlorostyrene	W	0.00021	0.00020
25	Oil and grease	W	1.8	1.4
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

ATG	Analytical Test Group
TEQ	total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day	kilograms per day
D	Daily monitoring requirement
W	Weekly monitoring requirement
Q	Quarterly monitoring requirement

PLANT: Dow Chemical Canada Inc. (Sarnia) — Vidal Street				
Designated Process Effluent Sampling Points: 1900, Biox Plant Effluent flowing into 4th Street Outfall to St. Clair River 2000, Boiler Feedwater Effluent flowing into 4th Street Outfall to St. Clair River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	140	43
4a	Total Kjeldahl nitrogen	D	78	22
5a	DOC	D	190	73
6	Total phosphorus	W	21	7.0
8	Total suspended solids	D	640	230
9	Aluminum	W	25	8.9
14	Phenolics (4AAP)	W	0.94	0.30
16	1,2-Dichloroethane	W	0.51	0.18
16	1,2-Dichloropropane	W	1.9	0.62
16	Methylene chloride	Q	0.089	-
16	Tetrachloroethylene	W	0.11	0.041
16	Trichloroethylene	Q	0.055	-
16	Vinyl chloride	Q	0.58	-
17	Ethylbenzene	Q	0.055	-
19	Bis (2-chloroisopropyl)ether	Q	0.076	-
23	1,2,4-Trichlorobenzene	W	0.017	0.0056
23	1,2,4,5-Tetrachlorobenzene	W	0.0020	0.00075
23	2,4,5-Trichlorotoluene	W	0.0037	0.0016

23	Hexachlorobenzene	Q	0.0030	-
23	Hexachloroethane	W	0.00052	0.00033
25	Oil and grease	W	180	76
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Dupont Canada Inc. (Kingston)				
Designated Process Effluent Sampling Point: 0600, Flake Effluent to Catch Tank				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	D	11	7.6
6	Total phosphorus	W	1.3	0.42
8	Total suspended solids	D	43	13
12	Mercury	Q	0.00036	-
14	Phenolics (4AAP)	W	0.0072	0.0035
19	Biphenyl	Q	0.014	-
19	Diphenyl ether	W	0.071	0.029
25	Oil and grease	W	7.5	2.9

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Dupont Canada Inc. (Maitland)				
Designated Process Effluent Sampling Points: 0300, Wastewater Treatment Plant Effluent to Main Effluent Stream 0400, CFH Effluent to Cribbed Ditch				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
2	Cyanide Total	W	5.5	2.1
4a	Ammonia plus Ammonium	W	140	48
4b	Nitrate + Nitrite	W	110	40
4a	Total Kjeldahl nitrogen	D	320	93
5a	DOC	D	710	360
6	Total phosphorus	W	21	8.0
8	Total suspended solids	D	650	210
9	Chromium	W	1.1	0.46
9	Cobalt	W	0.71	0.23
9	Copper	W	0.28	0.098
9	Vanadium	W	0.58	0.29
10	Arsenic	W	0.89	0.19
14	Phenolics (4AAP)	W	0.29	0.14
16	Tetrachloroethylene	D	1.0	0.61
23	Hexachlorobenzene	Q	0.0053	-
25	Oil and grease	W	120	46
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		

	TEQ	Q

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Ethyl Canada Inc. (Sarnia)				
Designated Process Effluent Sampling Point: 0200, Speciality Chemicals Effluent				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4b	Nitrate + Nitrite	W	0.30	0.15
5a	DOC	D	0.30	0.087
6	Total phosphorus	Q	0.0050	-
8	Total suspended solids	D	0.46	0.10
9	Aluminum	D	0.35	0.17
9	Chromium	Q	0.0043	-
9	Lead	D	0.018	0.0035
12	Mercury	Q	0.000017	-
14	Phenolics (4AAP)	W	0.00023	0.000078
16	1,2-Dichloroethane	W	0.0071	0.0028
16	Ethylene dibromide	Q	0.0021	-
17	Toluene	W	0.00047	0.00010
25	Oil and grease	W	0.17	0.13

PLANT: GE Plastics Canada (Cobourg)				
Designated Process Effluent Sampling Point: 0100, Final Filter Effluent to Lake				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
2	Cyanide Total	Q	0.024	-
4a	Ammonia plus Ammonium	W	1.2	0.60
4b	Nitrate + Nitrite	W	5.5	2.2
4a	Total Kjeldahl nitrogen	D	4.0	1.2
5a	DOC	D	14	6.9
6	Total phosphorus	W	0.48	0.24
8	Total suspended solids	D	24	12
9	Aluminum	Q	0.74	-
10	Antimony	Q	0.21	-
14	Phenolics (4AAP)	W	0.055	0.022
25	Oil and grease	W	28.2	9.9

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Geon Canada Inc. (Niagara Falls)				
Designated Process Effluent Sampling Point: 0100, Final Effluent to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day

	Column 1	Column 2	Column 3	Column 4
2	Cyanide Total	Q	0.55	-
4a	Ammonia plus Ammonium	W	21	12
4a	Total Kjeldahl nitrogen	D	38	24
5a	DOC	D	194	126
6	Total phosphorus	W	4	2.9
8	Total suspended solids	D	91	50
9	Aluminum	Q	9.5	-
14	Phenolics (4AAP)	W	0.32	0.10
16	Vinyl chloride	W	0.24	0.091
25	Oil and grease	W	28	16
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Imperial Oil Chemicals Division (Sarnia)				
Designated Process Effluent Sampling Point: 0200, Carbon Contactor 0300. Final Effluent to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	117	40
8	Total suspended solids	W	187	60.7
16	Vinyl chloride	D	11	2.4
17	Benzene	W	0.28	0.09
23	Hexachlorobutadiene	Q	0.004	-
25	Oil and grease	W	17.7	8

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Nova Chemicals Canada Ltd (Corunna)				
Designated Process Effluent Sampling Point: 0200, Final Effluent to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	440	220
6	Total phosphorus	Q	22	-
8	Total suspended solids	W	1300	570
9	Aluminum	Q	45	-
14	Phenolics (4AAP)	W	0.75	0.34
17	Toluene	Q	1.3	-
25	Oil and grease	W	460	170

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement

W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Nova Chemicals Canada Ltd (Mooretown)				
Designated Process Effluent Sampling Point: 0100, Final Effluent to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	19	11
6	Total phosphorus	W	1.9	1.1
8	Total suspended solids	D	98	34
9	Aluminum	Q	2.6	-
9	Zinc	Q	0.28	-
14	Phenolics (4AAP)	W	0.015	0.0070
25	Oil and grease	W	6.6	3.3

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: RohMax Canada (Morrisburg)				
Designated Process Effluent Sampling Point: 0100, Final Outfall to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	D	16	5.0
6	Total Phosphorus	Q	0.65	-
8	Total suspended solids	W	14	6.5
14	Phenolics (4AAP)	W	0.0056	0.0026
17	Toluene	W	0.035	0.013
25	Oil and grease	W	4.8	2.1

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Stepan Canada Inc. (Longford Mills)				
Designated Process Effluent Sampling Point: 0200, Clarifier Effluent				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	1.2	0.42
4a	Total Kjeldahl nitrogen	D	1.5	0.46
5a	DOC	D	6.2	2.8
6	Total phosphorus	W	0.16	0.061
8	Total suspended solids	D	6.3	2.1
9	Aluminum	W	0.68	0.24
14	Phenolics (4AAP)	W	0.0073	0.0028
16	Carbon tetrachloride	Q	0.0020	-
16	Chloroform	Q	0.0054	-
25	Oil and grease	W	2.2	0.94
27	PCBT	Q	0.040	-

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

O. Reg. 50/98, s. 2.

SCHEDULE 3
ANALYTICAL REQUIREMENTS AT PLANTS WITH MORE THAN ONE PROCESS EFFLUENT SAMPLING POINT

PLANT: Bayer Inc. (Sarnia)					
ATG	Parameter	Sampling Points			
		0900	1300	1700	1800
	Column 1	Column 2	Column 3	Column 4	Column 5
4a	Ammonia plus Ammonium	-	-	-	X
4b	Nitrate + Nitrite	-	-	-	X
4a	Total Kjeldahl nitrogen	-	-	X	X
5a	DOC	X	X	X	X
6	Total phosphorus	X	X	X	X
8	Total suspended solids	X	X	X	X
9	Aluminum	X	X	X	X
9	Cobalt	-	-	-	X
9	Zinc	X	X	X	X
14	Phenolics (4AAP)	X	X	X	X
16	Bromoform	-	-	-	X
16	Bromomethane	X	-	-	X
16	Chloroform	X	-	-	X
16	Chloromethane	X	X	-	X
16	Methylene chloride	X	-	-	X
17	Benzene	X	-	-	X
25	Oil and Grease	X	X	X	X

Explanatory Notes:
ATG Analytical Test Group
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Dow Chemical Canada Inc. (Sarnia) — Vidal Street			
ATG	Parameter	Sampling Points	
		1900	2000
	Column 1	Column 2	Column 3
4a	Ammonia plus Ammonium	X	-
4a	Total Kjeldahl nitrogen	X	-
5a	DOC	X	X
6	Total phosphorus	X	X
8	Total suspended solids	X	X
9	Aluminum	X	X
14	Phenolics (4AAP)	X	X
16	1,2-Dichloroethane	X	-
16	1,2-Dichloropropane	X	-
16	Methylene chloride	X	-
16	Tetrachloroethylene	X	-
16	Trichloroethylene	X	-
16	Vinyl chloride	X	-
17	Ethylbenzene	X	-
19	Bis (2-chloroisopropyl)ether	X	-
23	1,2,4-Trichlorobenzene	X	-
23	1,2,4,5-Tetrachlorobenzene	X	-
23	2,4,5-Trichlorotoluene	X	-
23	Hexachlorobenzene	X	-
23	Hexachloroethane	X	-
25	Oil and Grease	X	X

24	2,3,7,8-tetrachlorodibenzo-para-dioxin	X	X
	2,3,7,8-tetrachlorodibenzofuran	X	X
	TEQ	X	X

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Dupont Canada Inc. (Maitland)			
ATG	Parameter	Sampling Points	
		0300	0400
	Column 1	Column 2	Column 3
2	Cyanide Total	X	-
4a	Ammonia plus Ammonium	X	-
4b	Nitrate + Nitrite	X	-
4a	Total Kjeldahl nitrogen	X	-
5a	DOC	X	X
6	Total phosphorus	X	X
8	Total suspended solids	X	X
9	Chromium	X	-
9	Cobalt	X	-
9	Copper	X	-
9	Vanadium	X	-
10	Arsenic	-	X
14	Phenolics (4AAP)	X	X
16	Tetrachloroethylene	-	X
23	Hexachlorobenzene	-	X
25	Oil and grease	X	X
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	X	-
	2,3,7,8-tetrachlorodibenzofuran	X	-
	TEQ	X	-

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Imperial Oil Chemicals Division (Sarnia)			
ATG	Parameter	Sampling Points	
		200	300
	Column 1	Column 2	Column 3
5a	DOC	X	-
8	Total suspended solids	X	-
16	Vinyl chloride	-	X
17	Benzene	X	-
23	Hexachlorobutadiene	X	-
25	Oil and Grease	X	-

Explanatory Notes:
ATG Analytical Test Group
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

O. Reg. 50/98, s. 2.

SCHEDULE 4

PROCESS EFFLUENT BATCH: DESIGNATED SAMPLING POINTS, LIMITS, MONITORING FREQUENCY

PLANT: Dow Chemical Canada Inc. (Sarnia) — La Salle Road			
Designated Process Effluent Batch Sampling Points: 2300, La Salle Road Site - East Pond to Talfourd Creek			
ATG	Parameter	Monitoring	Batch Loading

		Frequency	Limit kg/batch
	Column 1	Column 2	Column 3
5a	DOC	B	130
6	Total phosphorus	B	3.8
8	Total suspended solids	B	160
14	Phenolics (4AAP)	B	0.090
25	Oil and grease	B	12

Explanatory Notes:
ATG Analytical Test Group
kg/batch kilograms per batch
B Batch monitoring requirement

PLANT: Ethyl Canada Inc. (Sarnia)			
Designated Process Effluent Batch Sampling Point: 0300, TEL Unit Effluent			
ATG	Parameter	Monitoring Frequency	Batch Loading Limit kg/batch
	Column 1	Column 2	Column 3
5a	DOC	B	7.3
6	Total phosphorus	B	0.28
8	Total suspended solids	B	11
9	Aluminum	B	7.4
9	Boron	B	4.68
9	Lead	B	1.60
9	Zinc	B	0.18
12	Mercury	B	0.0013
13	Total Alkyl Lead	B	1.1
14	Phenolics (4AAP)	B	0.015
15	Sulphide	B	0.15
16	1,2-Dichloroethane	B	0.21
16	Ethylene dibromide	B	0.11
16	Methylene chloride	B	0.030
17	Toluene	B	0.0046
19	1-Methylnaphthalene	B	0.027
19	2-Methylnaphthalene	B	0.026
19	Acenaphthene	B	0.0090
19	Biphenyl	B	0.0085
19	Fluorene	B	0.0081
19	Indole	B	0.67
19	Naphthalene	B	0.013
19	Phenanthrene	B	0.0064
25	Oil and grease	B	8.2

Explanatory Notes:
ATG Analytical Test Group
kg/batch kilograms per batch
B Batch monitoring requirement

O. Reg. 50/98, s. 2.

SCHEDULE 5
MERGED EFFLUENT: DESIGNATED SAMPLING POINTS, MONITORING FREQUENCY

PLANT: Bayer Inc. (Sarnia)		
Designated Merged Effluent Sampling Point: 0400, 66 inch Sewer to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W

PLANT: Celanese Canada Inc. (Millhaven)		
Designated Merged Effluent Sampling Point: 0100, Centre Outfall to Lake		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W

PLANT: Dow Chemical Canada Inc. (Sarnia) — Vidal Street		
Designated Merged Effluent Sampling Point: 0900, 4th Street Outfall to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W
14	Phenolics (4AAP)	W

PLANT: Dupont Canada Inc. (Kingston)		
Designated Merged Effluent Sampling Point: 1100, Catch Tank Effluent to Lake		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W
19	Diphenyl ether	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement

PLANT: Dupont Canada Inc. (Maitland)		
Designated Merged Effluent Sampling Point: 1100, Site Effluent to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W
14	Phenolics (4AAP)	W
25	Oil and Grease	W

PLANT: Ethyl Canada Inc. (Sarnia)		
Designated Merged Effluent Sampling Point: 0100, Final Effluent to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W
14	Phenolics (4AAP)	W
25	Oil and Grease	W

PLANT: Imperial Oil Chemicals Division (Sarnia)		
Designated Merged Effluent Sampling Point: 0300, Final Effluent to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W

14	Phenolics	W
17	Benzene	W
17	Toluene	W
23	Hexachlorobutadiene	W
25	Oil and Grease	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement

O. Reg. 50/98, s. 2.

SCHEDULE 6
COOLING WATER EFFLUENT: DESIGNATED SAMPLING POINTS, MONITORING FREQUENCY

PLANT: BASF Canada Inc. (Arnprior)		
Designated Cooling Water Effluent Sampling Point: 0100, Storm Discharge to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
6	Total phosphorus	W
8	Total suspended solids	W
14	Phenolics (4AAP)	W

PLANT: Bayer Inc. (Sarnia)		
Designated Cooling Water Effluent Sampling Points: 0200, 72 inch Sewer to River 0500, 54 inch Sewer to River 1400, Turbine Cooling Water to River 2100, NBR Cooling Water to Cole Drain 2200, BE-2 Cooling Water to Cole Drain		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W

PLANT: Celanese Canada Inc. (Millhaven)		
Designated Cooling Water Effluent Sampling Point: 0200, West Outfall to Lake		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W

PLANT: Dow Chemical Canada Inc. (Sarnia) — Vidal Street		
Designated Cooling Water Effluent Sampling Points: 0600, 2nd Street Outfall to River 0700, 3rd Street Outfall to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W
14	Phenolics (4AAP)	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement

PLANT: Dupont Canada Inc. (Kingston)

Designated Cooling Water Effluent Sampling Point: 0700, Service Sewer to Lake		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W
19	Diphenyl ether	W

PLANT: Dupont Canada Inc. (Whitby)		
Designated Effluent Sampling Point: 1000, Cooling Water Ditch at Pellet Pond		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement

PLANT: GE Plastics Canada (Cobourg)		
Designated Cooling Water Effluent Sampling Point: 0400, Cooling Water to Lake		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W
14	Phenolics (4AAP)	W
25	Oil and Grease	W

PLANT: Goodyear Canada Inc. (Bowmanville)		
Designated Cooling Water Effluent Sampling Points: 0200 Final Outfall		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
W Weekly monitoring requirement

PLANT: Morbern Inc. (Cornwall)		
Designated Cooling Water Effluent Sampling Point: 0100, East Cooling Water to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
6	Total phosphorus	W
8	Total suspended solids	W
9	Aluminum	W
9	Zinc	W
14	Phenolics (4AAP)	W
25	Oil and grease	W

PLANT: Stepan Canada Inc. (Longford Mills)
Designated Cooling Water Effluent Sampling Point:

0100, Cooling Water to Lake		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
6	Total phosphorus	W
8	Total suspended solids	W

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
W Weekly monitoring requirement

PLANT: Uniroyal Chemical Ltd. (Elmira)		
Designated Cooling Water Effluent Sampling Points: 0200, Outfall #2 to Canagagigue Creek 0800, Shirt Factory Creek from Site		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	DOC	W
8	Total suspended solids	W
14	Phenolics (4AAP)	W
25	Oil and Grease	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement

O. Reg. 50/98, s. 2.

SCHEDULE 7
ACUTE LETHALITY: SAMPLING POINTS

Plant Name	Sampling Point — Number and Description
Amoco Canada Petroleum Company Limited (Sarnia)	0100 , API Separator Effluent to River (Process Effluent)
BASF Canada Inc. (Arnprior)	0100 , Storm Discharge to River (Cooling Water)
Bayer Inc. (Sarnia)	0200 , 72 inch Sewer to River (Cooling Water) 0400 , 66 inch Sewer to River (Merged Effluent) 0500 , 54 inch Sewer to River (Cooling Water) 1300 , Butyl Holdup Pond to River (Process Effluent) 1400 , Turbine Cooling Water to River (Cooling Water) 1700 , Neutralization Sump to River (Process Effluent) 1800 , Biox Plant Effluent to River (Process Effluent) 2100 , NBR Cooling Water to Cole Drain (Cooling Water) 2200 , BE-2 Cooling Water to Cole Drain (Cooling Water)
Celanese Canada Inc. (Millhaven)	0100 , Centre Outfall to Lake (Merged Effluent) 0200 , West Outfall to Lake (Cooling Water)
Chinook Group Limited (Sombra)	0100 , Sump Effluent to River (Process Effluent)
Dow Chemical Canada Inc. (Sarnia) — Vidal Street	0600 , 2nd Street Outfall to River (Cooling Water) 0700 , 3rd Street Outfall to River (Cooling Water) 0900 , 4th Street Outfall to River (Merged Effluent)
Dow Chemical Canada Inc. (Sarnia) — Scott Road	2100 , Scott Road Treated Runoff to River (Process Effluent)
Dow Chemical Canada Inc. (Sarnia) — La Salle Road	2300 , La Salle Road Site - East Pond to Talfourd Creek (Process Effluent Batch)
Dupont Canada Inc. (Kingston)	0700 , Service Sewer to Lake (Cooling Water) 1100 , Catch Tank Effluent to Lake (Merged Effluent)
Dupont Canada Inc. (Maitland)	1100 , Site Effluent to River (Merged Effluent)
Dupont Canada Inc. (Whitby)	1000 , Cooling Water Ditch at Pellet Pond (Cooling Water)
Ethyl Canada Inc. (Sarnia)	0100 , Final Effluent to River (Merged Effluent)
GE Plastics Canada (Cobourg)	0100 , Clarifier Effluent to Lake (Process Effluent) 0400 , Cooling Water to Lake (Cooling Water)
Geon Canada Inc. (Niagara Falls)	0100 , Final Effluent to River (Process Effluent)
Goodyear Canada Inc. (Bowmanville)	0200 , Final Outfall (Cooling Water)
Imperial Oil Chemicals Division (Sarnia)	0300 , Final Effluent to River (Merged Effluent)
Morbern Inc. (Cornwall)	0100 , East Cooling Water to River (Cooling Water)

Novacor Chemicals Canada Ltd. (Corunna)	0200 , Final Effluent to River (Process Effluent)
Novacor Chemicals Canada Ltd. (Mooretown)	0100 , Final Effluent to River (Process Effluent)
RohMax Canada (Morrisburg)	0100 , Final Outfall to River (Process Effluent)
Stepan Canada Inc. (Longford Mills)	0100 , Cooling Water to Lake (Cooling Water) 0200 , Clarifier Effluent (Process Effluent)
Uniroyal Chemical Ltd. (Elmira)	0200 , Outfall #2 to Canagagigue Creek (Cooling Water) 0800 , Shirt Factory Creek from Site (Cooling Water)

O. Reg. 50/98, s. 2.

SCHEDULE 8
ACUTE LETHALITY TESTING: SAMPLING POINTS

Plant Name	Sampling Point — Number and Description
Bayer Inc. (Sarnia)	0900 , Butyl II Effluent to 66 inch Sewer
Celanese Canada Inc. (Millhaven)	0400 , Treatment Plant Effluent to Centre Outfall
Dow Chemical Canada Inc. (Sarnia) — Vidal Street	1900 , Biox Plant Effluent to 4th Street Outfall
Dupont Canada Inc. (Kingston)	0600 , Flake Effluent to Catch Tank
Dupont Canada Inc. (Maitland)	0300 , Wastewater Treatment Plant Effluent to Main Effluent Stream 0400 , CFH Effluent to Cribbed Ditch
Ethyl Canada Inc. (Sarnia)	0200 , Specialty Chemicals Effluent 0300 , TEL Unit Effluent
Imperial Oil Chemicals Division (Sarnia)	0200 , Carbon Contactor

O. Reg. 50/98, s. 2.

SCHEDULE 9
CHRONIC TOXICITY TESTING: SAMPLING POINTS

Plant Name	Sampling Point — Number and Description
Amoco Canada Petroleum Company Limited (Sarnia)	0100 , API Separator Effluent to River (Process Effluent)
Bayer Inc. (Sarnia)	0400 , 66 inch Sewer to River (Merged Effluent) 1300 , Butyl Holdup Pond to River (Process Effluent) 1700 , Neutralization Sump to River (Process Effluent) 1800 , Biox Plant Effluent to River (Process Effluent)
Celanese Canada Inc. (Millhaven)	0100 , Centre Outfall to Lake (Merged Effluent)
Chinook Group Limited (Sombra)	0100 , Sump Effluent to River (Process Effluent)
Dow Chemical Canada Inc. (Sarnia) — Vidal Street	0900 , 4th Street Outfall to River (Merged Effluent)
Dow Chemical Canada Inc. (Sarnia) — Scott Road	2100 , Scott Road Treated Runoff to River (Process Effluent)
Dow Chemical Canada Inc. (Sarnia) — La Salle Road	2300 , La Salle Road Site - East Pond to Talfourd Creek (Process Effluent Batch)
Dupont Canada Inc. (Kingston)	1100 , Catch Tank Effluent to Lake (Merged Effluent)
Dupont Canada Inc. (Maitland)	1100 , Site Effluent to River (Merged Effluent)
Ethyl Canada Inc. (Sarnia)	0100 , Final Effluent to River (Merged Effluent)
GE Plastics Canada (Cobourg)	0100 , Clarifier Effluent to Lake (Process Effluent)
Geon Canada Inc. (Niagara Falls)	0100 , Final Effluent to River (Process Effluent)
Imperial Oil Chemicals Division (Sarnia)	0300 , Final Effluent to River (Process Effluent)
Nova Chemicals Canada Ltd. (Corunna)	0200 , Final Effluent to River (Process Effluent)
Nova Chemicals Canada Ltd. (Mooretown)	0100 , Final Effluent to River (Process Effluent)
RohMax Canada (Morrisburg)	0100 , Final Outfall to River (Process Effluent)
Stepan Canada Inc. (Longford Mills)	0200 , Clarifier Effluent (Process Effluent)

O. Reg. 50/98, s. 2.

SCHEDULE 10
STORM WATER CONTROL STUDY PARAMETERS

PLANT: Cornwall Chemicals Ltd, (Cornwall)	
ATG	Parameter
	Column 1
5a	Dissolved Organic Carbon
6	Total phosphorus
8	Total suspended solids
9	Aluminum
9	Nickel
9	Zinc
12	Mercury
15	Sulphide
16	Carbontetrachloride
23	Hexachloroethane

25	Oil and Grease
24	2,3,7,8-tertachlorodibenzo-para-dioxin
	2,3,7,8-tetrachlorodibenzofuran
	TEQ

PLANT: Nova Chemicals Canada Ltd. (Sarnia)	
ATG	Parameter
	Column 1
5a	Dissolved Organic Carbon
8	Total suspended solids
9	Aluminum
14	Phenolics (4AAP)
17	Benzene
17	Ethylbenzene
17	Toluene
25	Oil and Grease

PLANT: OxyChem Durez (Fort Erie)	
ATG	Parameter
	Column 1
3	pH
4a	Ammonia plus Ammonium
5a	Dissolved Organic Carbon
6	Total phosphorus
8	Total suspended solids
9	Aluminum
	Chromium
	Zinc
14	Phenolics (4AAP)
25	Oil and Grease

Explanatory Notes:
ATG Analytical Test Group

PLANT: RohMax Canada (West Hill)	
ATG	Parameter
	Column 1
4b	Nitrate plus Nitrite
5a	Dissolved Organic Carbon
8	Total suspended solids
9	Aluminum
	Boron
	Molybdenum
14	Phenolics (4AAP)
25	Oil and Grease

Explanatory Notes:
ATG Analytical Test Group

O. Reg. 50/98, s. 2.

SCHEDULE 11
REFERENCE MATERIALS

Plant Name	Materials
Amoco Canada Petroleum Company Limited	•Propane •Isobutane •n-Butane •Hydrocarbon Condensate
Bayer Inc.	•Butadiene Rubbers •Specialty Rubbers
Celanese Canada Inc.	•Polyester Staple Fibre
Chinook Group Limited	•Alkyl Amines •Dimethyl Formamide •Choline Chloride
Cornwall Chemicals Limited	•Carbon Disulphide •Carbon Tetrachloride
Dow Chemical Canada Inc. (Sarnia) — Vidal Street	•Ethylbenzene •Styrene •Polystyrene •Polyethylene

	•Acrylic Latex •Epoxy Resins •Propylene Oxide Derivatives
Dupont Canada Inc. (Kingston)	•Nylon 66 Yarn •Nylon 66 Resin
Dupont Canada Inc. (Maitland)	•Adipic Acid •Hexamethylene Diamine •Dichlorotrifluoroethane (HCFC-123)
Ethyl Canada Inc.	•Tetraethyl Lead •Aluminum Alkyls •Diesel Ignition Improvers
GE Plastics Canada	Various resin plastics in pellet form including: •Acrylonitrile-Butadiene-Styrene (ABS) •Polycarbonate •ABS/Polycarbonate •Polybutylene Terephthalate (PBT) •Polybutylene Terephythalate (PBT)/Polycarbonate •Polyphenylene Oxide (PPO)Polystyrene •Polyetherimide
Geon Canada Inc.	•Polyvinyl Chloride (PVC) Resins
Imperial Oil Chemicals Division	•Polyvinyl Chloride (PVC) Resins •Polyethylene Resins •Aromatics Feed
Nova Chemicals Canada Ltd. (Corunna)	•Polyethylene
Nova Chemicals Canada Ltd. (Mooretown)	•Polyethylene
RohMax Canada — Morrisburg	•Petroleum Additives
Stepan Canada Inc.	•Surfactants

O. Reg. 50/98, s. 2.

Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 64/95

Amended to O. Reg. 51/98

EFFLUENT MONITORING AND EFFLUENT LIMITS — INORGANIC CHEMICAL SECTOR

Notice of Currency:* This document is up to date.

*This notice is usually current to within two business days of accessing this document. For more current amendment information, see the Table of Regulations (Legislative History).

This Regulation is made in English only.

PART I
GENERAL

INTERPRETATION

1. (1) In this Regulation,

"assessment parameter", in relation to a plant, means a parameter that is listed for the plant in Schedule 6;

"cooling water effluent monitoring stream" means a stream on which a sampling point is established under subsection 8 (4);

"cooling water effluent sampling point" means a sampling point established under subsection 8 (4);

"Director", in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger's plant is located and includes an alternate named by the Director;

"discharger" means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

"limited parameter",

(a) in relation to a plant named in Schedule 4, means a parameter for which a limit is specified in Column 3 of Schedule 4 for the plant, and

(b) in relation to a plant not named in Schedule 4, means a parameter for which a limit is specified in Column 3 or 4 of Schedule 2;

"merged effluent monitoring stream" means a stream on which a sampling point is established under subsection 8 (3);

"merged effluent sampling point" means a sampling point established under subsection 8 (3);

"merged parameter", in relation to a plant, means a parameter that is listed for the plant in Schedule 5;

"pick up", in relation to a sample, means pick up for the purpose of storage, including storage within an automatic sampling device, and transportation to and analysis at a laboratory;

"plant" means an industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;

"process change" means a change in equipment, production processes, process materials or treatment processes;

"process effluent batch monitoring stream" means a stream on which a sampling point is established under subsection 8 (2);

"process effluent batch sampling point" means a sampling point established under subsection 8 (2);

"process effluent monitoring stream" means a stream on which a sampling point is established under subsection 8 (1);

"process effluent sampling point" means a sampling point established under subsection 8 (1);

"process materials", in relation to a discharger's plant, means raw materials for use in an industrial process at the plant, manufacturing intermediates produced at the plant, or products or by-products of an industrial process at the plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

"quarter" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"semi-annual period" means all or part of a period of six months beginning on the first day of January or July;

"specific parameter" means 2,3,7,8-tetrachlorodibenzo-para-dioxin, 2,3,7,8-tetrachlorodibenzofuran and 2,3,7,8 substituted dioxin and furan congeners.

(2) For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(3) An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger's behalf. O. Reg. 64/95, s. 1.

PURPOSE

2. The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants listed in Schedule 1. O. Reg. 64/95, s. 2.

APPLICATION

3. (1) This Regulation applies only with respect to the plants listed in Schedule 1.

(2) This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer. O. Reg. 64/95, s. 3.

OBLIGATIONS UNDER APPROVALS, ORDERS, ETC.

4. For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 64/95, s. 4.

NON-APPLICATION OF THE GENERAL EFFLUENT MONITORING REGULATION

5. This Regulation is not a Sectoral Effluent Monitoring Regulation within the meaning of Ontario Regulation 695/88. O. Reg. 64/95, s. 5.

BY-PASSES

6. Beginning on February 16, 1998, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger's plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 64/95, s. 6.

SAMPLING AND ANALYTICAL PROCEDURES

7. (1) Each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(2) Each discharger shall maintain the sampling equipment used at the discharger's plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of each limited parameter, merged parameter, assessment parameter and specific parameter from the plant. O. Reg. 64/95, s. 7.

PART II
SAMPLING POINTS

ESTABLISHMENT AND ELIMINATION OF SAMPLING POINTS

8. (1) Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a process effluent sampling point in Schedule 2 for the discharger's plant.

(2) Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a process effluent batch sampling point in Schedule 4 for the discharger's plant.

(3) Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a merged effluent sampling point in Schedule 5 for the discharger's plant.

(4) Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a cooling water effluent sampling point in Schedule 6 for the discharger's plant.

(5) If the Director is satisfied, on the basis of written submissions from a discharger, that one or more of the circumstances described in subsection (6) exist at the discharger's plant, with the result that it is impractical to maintain or use a sampling point established at the plant under this Regulation, the Director may give the discharger written permission to eliminate the sampling point.

(6) For the purposes of subsection (5), the circumstances at the discharger's plant that might make it impractical to maintain or use a sampling point are the following:

1. A process change or redirection of or change in the character of an effluent stream has occurred or is expected to occur at the discharger's plant.
2. Equipment used for sampling or flow measurement at the sampling point is damaged or non-functional.
3. The effluent flowing in the stream on which the sampling point was established under this Regulation has been or is expected to be permanently eliminated.

(7) Where a discharger is permitted to eliminate a sampling point because of a circumstance described in paragraph 1 or 2 of subsection (6), the discharger shall, within 90 days after the day on which the sampling point is eliminated, establish a replacement sampling point.

(8) The replacement sampling point shall be established on the effluent stream from which the sampling point was eliminated, at a location approved in writing by the Director.

(9) The Director shall not approve a location for the replacement sampling point unless he or she is satisfied that monitoring at the new location would yield results that would reflect the level of discharge of each limited parameter, merged parameter and assessment parameter from the discharger's plant as reliably as did monitoring at the eliminated sampling point.

(10) A discharger who replaces a sampling point under subsection (7) has all the same obligations in connection with the replacement sampling point that the discharger had in connection with the eliminated sampling point. O. Reg. 64/95, s. 8.

REPORTS ON SAMPLING POINTS

9. (1) By May 25, 1995, each discharger shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger's plant as of May 15, 1995.

(2) Each discharger who eliminates a sampling point at the discharger's plant under subsection 8 (5) but is not required to replace the sampling point under subsection 8 (7) shall, within 30 days after the day on which a sampling point is eliminated, give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point.

(3) Within 30 days after replacing a sampling point under subsection 8 (7), the discharger shall give the Director a written notice describing the location of the replacement sampling point, together with a revised list and plot plan showing the replacement sampling point. O. Reg. 64/95, s. 9.

USE OF SAMPLING POINTS ESTABLISHED UNDER THIS PART

10. Except as permitted or required under section 25, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 64/95, s. 10.

PART III
CALCULATION OF LOADINGS

CALCULATION OF LOADINGS — GENERAL

11. (1) For the purposes of performing a calculation under sections 12, 13, 14 and 15, a discharger shall use the actual analytical result obtained by the laboratory.

(2) Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994, the discharger shall use the value zero for the purpose of performing a calculation under sections 12, 13, 14 and 15.

(3) Each discharger shall ensure that each calculation of a process effluent loading required by section 12, each calculation of a process effluent batch loading required by section 13 and each calculation of a merged effluent loading required by section 14 is performed as soon as reasonably possible after the analytical result on which the calculation is based becomes available to the discharger.

(4) Each discharger shall ensure that each calculation of a cooling water effluent loading required by section 15 is performed in time to comply with subsection 41 (4). O. Reg. 64/95, s. 11.

CALCULATION OF LOADINGS — PROCESS EFFLUENT

12. (1) Each discharger shall calculate, in kilograms, a daily process effluent stream loading for each limited parameter in each process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 34, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily process effluent plant loading for each limited parameter for each day for which the discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1), the daily process effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily process effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average process effluent plant loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average process effluent plant loading for a parameter for a month is the arithmetic mean of the daily process effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 64/95, s. 12.

CALCULATION OF LOADINGS — PROCESS EFFLUENT — BATCH

13. (1) In addition to complying with section 12, each discharger shall calculate, in kilograms, a process effluent batch stream loading for each limited parameter in each process effluent batch monitoring stream of the discharger for each process effluent batch for which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a batch stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the batch volume of effluent, as determined under section 34, for the stream for the batch. O. Reg. 64/95, s. 13.

CALCULATION OF LOADINGS — MERGED EFFLUENT

14. (1) Each discharger shall calculate, in kilograms, a daily merged effluent stream loading for each merged parameter in each merged effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 34, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily merged effluent plant loading for each merged parameter for each day for which the discharger is required to calculate a merged effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily merged effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily merged effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily merged effluent stream loading for a parameter for a day under subsection (1), the daily merged effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily merged effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average merged effluent plant loading for each merged parameter for each month in which a sample is collected under this Regulation more than once from a merged effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average merged effluent plant loading for a parameter for a month is the arithmetic mean of the daily merged effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 64/95, s. 14.

CALCULATION OF LOADINGS — COOLING WATER

15. (1) Each discharger shall calculate, in kilograms, a daily cooling water effluent stream loading for each assessment parameter in each cooling water effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 34, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily cooling water effluent plant loading for each assessment parameter for each day for which the discharger is required to calculate a daily cooling water effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily cooling water effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily cooling water effluent stream loading for a parameter for a day under subsection (1), the daily cooling water effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily cooling water effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average cooling water effluent plant loading for each assessment parameter for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average cooling water effluent plant loading for a parameter for a month is the arithmetic mean of the daily cooling water effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 64/95, s. 15.

PART IV
PARAMETER AND LETHALITY LIMITS

PARAMETER LIMITS

16. (1) Each discharger shall ensure that each daily process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2.

(2) Each discharger shall ensure that each monthly average process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the monthly average plant loading limit specified for the parameter and the plant in Column 4 of Schedule 2.

(3) Each discharger shall ensure that each process effluent batch stream loading calculated for a parameter under section 13 in connection with the discharger's plant does not exceed the batch loading limit specified for the parameter and the plant in Column 3 of Schedule 4.

(4) Each discharger shall control the quality of each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger's plant to ensure that the concentration of 2,3,7,8-tetrachlorodibenzo-para-dioxin and the concentration of 2,3,7,8-tetrachlorodibenzofuran are both non-measurable in any sample collected at a process effluent sampling point or a process effluent batch sampling point at the plant.

(5) For the purposes of subsection (4), the concentration of 2,3,7,8-tetrachlorodibenzo-para-dioxin in a sample is non-measurable if analysis of the sample shows a concentration of 2,3,7,8-tetrachlorodibenzo-para-dioxin of less than 20 picograms per litre and the concentration of 2,3,7,8-tetrachlorodibenzofuran in a sample is non-measurable if analysis of the sample shows a concentration of 2,3,7,8-tetrachlorodibenzofuran of less than 50 picograms per litre.

(6) Each discharger shall control the quality of each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger's plant to ensure that the total toxic equivalent concentration of 2,3,7,8 substituted dioxin and furan congeners in any sample collected at a process effluent sampling point or a process effluent batch sampling point at the plant, calculated in accordance with the methods described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994, does not exceed 60 picograms per litre.

(7) Subject to subsections (8) to (10), each discharger shall control the quality of each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger's plant to ensure that the pH value of any sample collected at a process effluent sampling point or a process effluent batch sampling point at the plant is within the range of 6.0 to 9.5.

(8) Throughout any day on which a discharger has used an alternate sampling point on a process effluent monitoring stream for sampling required by section 25, as permitted by subsections 25 (7) and (8), the discharger,

(a) shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

(b) need not comply with subsection (7) with respect to the stream.

(9) Subsection (7) does not apply to any process effluent monitoring stream for which no sampling point is listed in Schedule 7 or 8.

(10) Each discharger shall control the quality of each process effluent monitoring stream described in subsection (9) to ensure that the pH value of any sample collected under this Regulation from the stream is within the range of 6.0 to 12.0. O. Reg. 64/95, s. 16.

LETHALITY LIMITS

17. Each discharger shall control the quality of each stream at the discharger's plant for which a sampling point is listed in Schedule 7 to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a sampling point listed in Schedule 7 for the plant results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 64/95, s. 17.

PART V
MONITORING

MONITORING — GENERAL

18. (1) Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters, the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(2) A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(3) Subject to subsection (4), each discharger shall pick up all sets of samples required to be picked up at the discharger's plant under sections 19, 20, 21, 23 and 32 between the hours of 7 a.m. and 10 a.m.

(4) If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger's plant are such that it would be impractical to pick up a set of samples from each sampling point established at the plant under this Regulation within the time period specified in subsection (3), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (3).

(5) Subject to subsections (6) and (7), where a discharger is required by section 19, 20, 21, 23 or 32 to pick up a set of samples the discharger shall pick up a set collected over the 24-hour period immediately preceding the pick-up.

(6) The 24-hour period referred to in subsection (5) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (3) or of a different three-hour period specified in a notice under subsection (4).

(7) Where a notice has been given under subsection (4) in respect of a plant specifying a time period longer than three hours, the 24-hour period referred to in subsection (5) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(8) If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (4) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (4) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 64/95, s. 18.

MONITORING — PROCESS EFFLUENT — DAILY

19. (1) Each discharger shall, on each day, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is daily.

(2) A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an "x" in the column for that sampling point in Schedule 3.

(3) A discharger is relieved of the obligations under subsection (1) relating to a parameter and shall instead, on three days in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and analyze each set of samples for the parameter where,

(a) the discharger has performed monitoring under subsection (1) for 12 consecutive months; and

(b) the monthly average process effluent plant loading for the parameter, for each of the 12 months, as calculated under subsection 12 (6), is equal to or less than 75 per cent of the monthly average plant loading limit for the parameter as set out in Column 4 of Schedule 2 for the discharger's plant.

(4) There shall be an interval of at least 24 hours between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a week shall be picked up on the same three days in the week.

(6) Subsection (3) ceases to apply in relation to a parameter and a discharger shall instead comply with the requirements of subsection (1) in relation to the parameter where, during any 12 consecutive months,

(a) a daily process effluent plant loading for the parameter, as calculated under subsection 12 (3), exceeds the daily plant loading limit for the parameter as set out in Column 3 of Schedule 2 for the discharger's plant, on any three occasions; or

(b) a monthly average process effluent plant loading for the parameter, as calculated under subsection 12 (6), exceeds the monthly average plant loading limit as set out in Column 4 of Schedule 2 for the discharger's plant, on any two occasions.

(7) A discharger shall notify the Director in writing of any change in the frequency of monitoring under this section at the discharger's plant within 30 days after the day on which the change occurs.

(8) A discharger need not meet the requirements of subsection (1) where it is impossible to do so because of sampling by a provincial officer. O. Reg. 64/95, s. 19.

MONITORING — PROCESS EFFLUENT — WEEKLY

20. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly.

(2) A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an "x" in the column for that sampling point in Schedule 3.

(3) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 64/95, s. 20.

MONITORING — PROCESS EFFLUENT — QUARTERLY

21. (1) Each discharger shall, on one day in each quarter, on a day on which samples are picked up at the plant under subsection 20 (1), or, in a quarter in which no samples are picked up at the plant under section 20, on any day in the quarter, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is quarterly. O. Reg. 523/95, s. 2.

(2) A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an "x" in the column for that sampling point in Schedule 3.

(3) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a quarter shall be picked up on the same day in the quarter. O. Reg. 64/95, s. 21 (2-4).

MONITORING — PROCESS EFFLUENT — BATCH

22. (1) Each discharger shall, each time a batch of effluent flows past a process effluent batch sampling point at the discharger's plant, pick up a set of samples collected at the sampling point and shall analyze the set of samples for the parameters listed in Column 1 of Schedule 4 for the discharger's plant.

(2) Where a discharger is required by subsection (1) to pick up a set of samples collected at a process effluent batch sampling point, the discharger shall pick up a set collected throughout the period during which the batch flowed past the sampling point. O. Reg. 64/95, s. 22.

MONITORING — MERGED EFFLUENT — WEEKLY

23. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each merged effluent sampling point at the plant and shall analyze each set of samples for the parameters listed in Column 1 of Schedule 5 for the discharger's plant.

(2) All samples collected and picked up at a plant under subsection (1) shall be collected and picked up on a day on which samples are picked up at the plant under subsection 20 (1) or, in a month in which no samples are picked up at the plant under subsection 20 (1), on a day on which samples are picked up at the plant under subsection 22 (1). O. Reg. 64/95, s. 23.

MONITORING — PROCESS EFFLUENT — QUALITY CONTROL

24. (1) On one day in each year after 1995, on a day on which samples are picked up at the plant under subsection 20 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 20 (1) at one process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly or quarterly.

(2) Despite subsection (1), a discharger need not analyse any sample under subsection (1) for 2,3,7,8-tetrachlorodibenzo-para-dioxin, 2,3,7,8-tetrachlorodibenzofuran or 2,3,7,8 substituted dioxin and furan congeners.

(3) Each discharger shall prepare a travelling blank and a travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(4) There shall be an interval of at least six months between successive pick-up days at the plant under subsection (1). O. Reg. 64/95, s. 24.

MONITORING — PROCESS EFFLUENT — pH MEASUREMENT

25. (1) Each discharger shall, on each day, during the time period applicable to the plant under subsection 18 (3) or (4), collect a grab sample from each process effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH.

(2) Each discharger shall, within each 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) on each day, collect two more grab samples from each process effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH.

(3) There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a sampling point, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each day during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection in each day.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period.

(7) For the purposes of subsections (1) to (6), a discharger shall use either the sampling point established under subsection 8 (1) on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(8) Before using an alternate sampling point under subsection (7), a discharger shall give the Director,

(a) a written notice that,

(i) sets out the name of the alternate sampling point,

(ii) describes its location, and

(iii) assigns a number to it; and

(b) a revised version of the list and plot plan submitted under section 9 showing the alternate sampling point.

(9) Each discharger shall, each time a batch of effluent flows past a process effluent batch sampling point at the discharger's plant, collect three grab samples from the sampling point and shall analyze each sample for the parameter pH.

(10) Where a discharger is required by subsection (9) to collect three grab samples in respect of a batch of effluent, the discharger shall make every reasonable effort to ensure,

(a) that the first grab sample is collected as soon as possible after the batch begins to flow past the sampling point;

(b) that the third grab sample is collected as little before the batch ceases to flow past the sampling point as possible; and

(c) that the interval between the collection of the first and second grab samples is as equal as possible to the interval between the collection of the second and third grab samples. O. Reg. 64/95, s. 25.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

26. (1) Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", dated July, 1990.

(2) Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) On one day in each month, each discharger shall collect and immediately pick up a grab sample at each process effluent sampling point listed in Schedule 7 for the discharger's plant and shall perform a rainbow trout acute lethality test on each sample. O. Reg. 64/95, s. 26 (1-3).

(4) All samples collected and picked up at a plant under subsection (3) shall be collected and picked up,

(a) on a day on which samples are picked up at the plant under subsection 20 (1);

(b) in a month in which no samples are picked up at the plant under subsection 20 (1), on a day on which samples are picked up at the plant under section 21; or

(c) in a month in which no samples are picked up at the plant under subsection 20 (1) or 21 (1), on any day in the month. O. Reg. 523/95, s. 3 (1).

(5) There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (3).

(6) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(7) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(8) Samples picked up at a plant under subsection (7) shall be picked up on a day on which samples are picked up at the plant under subsection (3). O. Reg. 64/95, s. 26 (5-8).

(9) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (7) shall be picked up,

(a) on a day on which samples are picked up at the plant under subsection 20 (1); or

(b) in a quarter in which no samples are picked up at the plant under subsection 20 (1), on a day on which samples are picked up at the plant under section 21. O. Reg. 523/95, s. 3 (2).

(10) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (7).

(11) All samples picked up under subsection (7) in a quarter shall be picked up on the same day in the quarter.

(12) If a rainbow trout acute lethality test performed under subsection (7) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (7) to (11) cease to apply in relation to samples from that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further 12 consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

(13) A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger's plant, within 30 days after the day on which the change begins. O. Reg. 64/95, s. 26 (1-13).

(14), (15) REVOKED: O. Reg. 64/95, s. 26 (16).

(16) SPENT: O. Reg. 64/95, s. 26 (16).

(17) Subsections (2) to (16) apply with necessary modifications to each process effluent batch sampling point listed in Schedule 7 for the discharger's plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 7 shall be deemed to be a reference to each process effluent batch sampling point listed in Schedule 7 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to subsection 22 (1).

(18) Subsections (2) to (16) apply with necessary modifications to each merged effluent sampling point listed in Schedule 7 for the discharger's plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 7 shall be deemed to be a reference to each merged effluent sampling point listed in Schedule 7 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to subsection 23 (1).

(19) Subsections (2) to (13) apply with necessary modifications to each cooling water effluent sampling point listed in Schedule 7 for the discharger's plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 7 shall be deemed to be a reference to each cooling water effluent sampling point listed in Schedule 7 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to section 32. O. Reg. 64/95, s. 26 (17-19).

MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

27. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*", dated July, 1990.

(2) Subsections 26 (2) to (19) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna*.

(3) Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger's plant under this section on a day on which the discharger collects a sample from the sampling point under section 26, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 26. O. Reg. 64/95, s. 27.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT — SAMPLING POINTS LISTED IN SCHEDULE 8

28. (1) Beginning on February 16, 1998, on one day in each month, on a day on which samples are picked up at the plant under section 23, each discharger shall collect and immediately pick up a grab sample at each sampling point that is listed in Schedule 8 for the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(2) Subsections 26 (1) and (2) apply with necessary modifications to each sample picked up at the discharger's plant under subsection (1).

(3) There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a month shall be picked up on the same day in the month.

(5) Where a discharger has performed tests under subsection (1) for 12 consecutive months on samples collected from the same sampling point, the discharger is relieved of the obligations under subsection (1) relating to the sampling point and shall instead, on one day in each quarter, on a day on which samples are picked up at the plant under section 23, collect and immediately pick up a grab sample at the sampling point and perform a rainbow trout acute lethality test on each sample.

(6) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (5).

(7) All samples picked up under subsection (5) in a quarter shall be picked up on the same day in the quarter. O. Reg. 64/95, s. 28.

MONITORING — ACUTE LETHALITY — *DAPHNIA MAGNA* — SAMPLING POINTS LISTED IN SCHEDULE 8

29. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*", dated July, 1990.

(2) Each *Daphnia magna* acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) Beginning on February 16, 1998, on one day in each month, on a day on which samples are picked up at the plant under section 23, each discharger shall collect and immediately pick up a grab sample at each sampling point that is listed in Schedule 8 for the discharger's plant and shall perform a *Daphnia magna* acute lethality test on each sample.

(4) There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(6) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a *Daphnia magna* acute lethality test on each sample.

(7) Samples picked up at a plant under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(8) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (6) shall be picked up on a day on which samples are picked up at the plant under section 23.

(9) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (6).

(10) All samples picked up under subsection (6) in a quarter shall be picked up on the same day in the quarter. O. Reg. 64/95, s. 29.

MONITORING — ACUTE LETHALITY — TOXICITY ELIMINATION REPORTS

30. (1) If three consecutive rainbow trout acute lethality tests performed under subsection 28 (1) or (5) or under a combination of subsections 28 (1) and (5) on samples picked up at a sampling point result in the mortality of more than 50 per cent of the test rainbow trout, the discharger shall submit to the Director a toxicity elimination report with respect to the stream on which the sampling point is located.

(2) A toxicity elimination report with respect to the stream on which the sampling point is located shall set out the following information:

1. A detailed analysis of the causes and sources of the mortality of more than 50 per cent of the test rainbow trout at the sampling point.
2. A synopsis of any studies conducted to support the analysis.
3. A detailed description of the methods by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.
4. An evaluation of the technical feasibility of implementing, at the discharger's plant, each method described under paragraph 3 and a statement of which of the methods are technically feasible.
5. An estimate of the financial cost to the discharger of implementing each method identified as technically feasible under paragraph 3.

(3) Where a discharger is required by subsection (1) to submit a toxicity elimination report to the Director, the discharger shall submit the report to the Director no later than 12 months after the day on which the third of three consecutive rainbow trout acute lethality tests was performed that resulted in the mortality of more than 50 per cent of the test rainbow trout at the sampling point on the stream.

(4) In addition, where a discharger is required by subsection (1) to submit a toxicity elimination report with respect to a stream, the discharger shall submit to the Director annual toxicity elimination progress reports with respect to the stream, no later than the anniversary of the day on which the toxicity elimination report with respect to the stream was required to be submitted under subsection (3).

(5) A toxicity elimination progress report with respect to a stream shall set out the following information:

1. A detailed description of any methods, in addition to those described under paragraph 3 of subsection (2) with respect to the stream, by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.
2. An evaluation of the technical feasibility of implementing, at the discharger's plant, each method described under paragraph 1 and a statement of which of the methods are technically feasible.
3. An estimate of the financial cost to the discharger of implementing each method identified as technically feasible under paragraph 2.

(6) Where a discharger has performed three consecutive quarterly tests under subsection 28 (5) on samples collected from a stream in relation to which the discharger has obligations under subsection (4) and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (4) in relation to that stream.

(7) Where a discharger has been relieved by subsection (6) of the obligation to submit toxicity elimination progress reports in relation to a stream and three consecutive quarterly tests under subsection 28 (5) on samples collected from that stream result in the mortality of more than 50 per cent of the test rainbow trout, subsection (6) ceases to apply and the discharger shall instead comply with the requirements of subsection (4) relating to the stream, until a further three consecutive quarterly tests under subsection 28 (5) on samples collected from the stream result in mortality for no more than 50 per cent of the rainbow trout in each test.

(8) Subsections (1) to (7) apply with necessary modifications to *Daphnia magna* acute lethality tests performed under section 29 and, for the purpose,

(a) a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna*; and

(b) a reference to subsection 28 (1) shall be deemed to be a reference to subsection 29 (3) and a reference to subsection 28 (5) shall be deemed to be a reference to subsection 29 (6). O. Reg. 64/95, s. 30.

MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

31. (1) Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", dated February, 1992.

(2) Where a discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*", dated February, 1992. O. Reg. 64/95, s. 31 (1, 2).

(3) On one day in each semi-annual period, each discharger shall collect and immediately pick up a grab sample from each sampling point listed in Schedule 9 for the discharger's plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

(3.1) All samples collected and picked up at a plant under subsection (3) shall be collected and picked up,

(a) on a day on which samples are picked up at the plant under section 20;

(b) in a semi-annual period in which no samples are picked up at the plant under section 20, on a day on which samples are picked up at the plant under section 22; or

(c) in a semi-annual period in which no samples are picked up at the plant under section 20 or 22, on a day on which samples are picked up at the plant under section 21. O. Reg. 523/95, s. 4.

(4) There shall be an interval of at least 90 days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a semi-annual period shall be picked up on the same day in the semi-annual period.

(6) A discharger need not collect a sample from a sampling point in accordance with subsection (3) until 12 consecutive monthly rainbow trout acute lethality tests and 12 consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at a discharger's plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 64/95, s. 31 (4-6).

MONITORING — COOLING WATER EFFLUENT — WEEKLY ASSESSMENT

32. (1) Each discharger shall, one day in each week, pick up a set of samples collected at each cooling water effluent sampling point at the plant and shall analyze each set of samples for the parameters listed in Column 1 of Schedule 6 for the discharger's plant.

(2) All samples picked up at a plant under subsection (1) shall be picked up,

(a) on the day on which samples are picked up at the plant under section 20;

(b) in a week in which no samples are picked up at the plant under section 20, on a day on which samples are picked up at the plant under section 22; or

(c) in a week in which no samples are picked up at the plant under section 20 or 22, on any day in the week.

(3) There shall be an interval of at least four days between successive pick-up days at the plant under clause (2) (c).

(4) All samples picked up under clause (2) (c) in a week shall be picked up on the same day in the week. O. Reg. 523/95, s. 5.

MONITORING — MERGED EFFLUENT — pH AND SPECIFIC CONDUCTANCE MEASUREMENT

33. (1) Each discharger shall, on one day in each week, on the day on which samples are picked up at the plant under section 20 or, in a week in which no samples are picked up at the plant under section 20, on a day on which samples are picked up at the plant under section 22, during the time period applicable to the plant under subsection 18 (3) or (4), collect a grab sample from each merged effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(2) Within the 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) in each week, the discharger shall collect two more grab samples from each merged effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(3) There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH and the parameter specific conductance on one day in each week, on the day on which samples are picked up at the plant under subsection 20 (1), during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection for the week.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period. O. Reg. 64/95, s. 33 (1-6).

(7) REVOKED: O. Reg. 523/95, s. 6 (2).

MONITORING — COOLING WATER EFFLUENT — pH AND SPECIFIC CONDUCTANCE MEASUREMENT

33.1 (1) Each discharger shall, on one day in each week, on the day on which samples are picked up at the plant under section 32, collect a grab sample from each cooling water effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(2) Within the 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) in each week, the discharger shall collect two more grab samples from each cooling water effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(3) There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH and the parameter specific conductance on one day in each week, on the day on which samples are picked up at the plant under section 32, during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection for the week.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period. O. Reg. 523/95, s. 7.

PART VI
EFFLUENT VOLUME

FLOW MEASUREMENT

34. (1) Subject to subsection (6), for the purposes of this section, a volume of effluent for a stream for a day is the volume that flowed past the sampling point established under section 8 on the stream during the 24-hour period preceding the pick-up of the first sample picked up from the stream for the day.

(2) Each discharger shall determine in cubic metres a daily volume of effluent for each process effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(3) Despite subsection (2), where a process effluent monitoring stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of the individual intermittent volume measurements.

(4) Each discharger shall use flow measurement methods that allow the daily volumes for process effluent monitoring streams to be determined to an accuracy of within plus or minus 15 per cent.

(5) Each discharger shall determine in cubic metres a batch volume of effluent for each process effluent batch monitoring stream at the discharger's plant, for each batch of effluent for which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(6) For the purposes of subsection (5), a batch volume of effluent for a process effluent batch monitoring stream for a batch is the volume of effluent that flows past the process effluent batch sampling point established under section 8 on the stream throughout the period of flow of the batch.

(7) Each discharger shall use flow measurement methods that allow the batch volumes for process effluent batch monitoring streams to be determined to an accuracy of within plus or minus 15 per cent.

(8) Each discharger shall determine in cubic metres a daily volume of effluent for each merged effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(9) Each discharger shall use flow measurement methods that allow the daily volumes for merged effluent monitoring streams to be determined to an accuracy of within plus or minus 20 per cent.

(10) Each discharger shall determine in cubic metres a daily volume of effluent for each cooling water effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(11) Each discharger shall use flow measurement methods that allow the daily volumes for cooling water effluent monitoring streams to be determined to an accuracy of within plus or minus 20 per cent.

(12) Each discharger shall, no later than the day that this section comes into force, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that,

(a) each flow measurement method used under subsections (2) and (3) meets the accuracy requirements of subsection (4);

(b) each flow measurement method used under subsection (5) meets the accuracy requirements of subsection (7);

(c) each flow measurement method used under subsection (8) meets the accuracy requirements of subsection (9); and

(d) each flow measurement method used under subsection (10) meets the accuracy requirements of subsection (11).

(13) Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsections (4), (7), (9) or (11), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(14) Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger's plant and shall maintain each flow measurement system according to good operating practices.

(15) Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 64/95, s. 34.

Calculation of Plant Volumes

35. (1) Each discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

(2) For the purposes of subsection (1), a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under section 34 for the day.

(3) Each discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) for the month.

(4) Each discharger shall calculate, in cubic metres, a daily merged effluent plant volume for each day.

(5) For the purposes of subsection (4), a merged effluent plant volume for a day is the sum of the daily merged effluent volumes determined under section 34 for the day.

(6) Each discharger shall calculate, in cubic metres, a monthly average merged effluent plant volume for each month, by taking the arithmetic mean of the daily merged effluent plant volumes calculated under subsection (4) for the month.

(7) Each discharger shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.

(8) For the purposes of subsection (7), a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under section 34 for the day.

(9) Each discharger shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection (7) for the month. O. Reg. 64/95, s. 35.

PART VII
STORM WATER CONTROL

STORM WATER CONTROL STUDY

36. (1) Each discharger shall complete a storm water control study in respect of the discharger's plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994. O. Reg. 64/95, s. 36 (1).

(1.1) Despite subsection (1), the requirements in respect of parameters for analysis required for process effluent and cooling water effluent, set out at page 5 of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994 do not apply in relation to the following plants:

1. Columbian Chemicals Canada Ltd.
2. Partek Insulations Ltd.

(1.2) For the purposes of subsection (1), the discharger shall complete a storm water control study using the parameters set out in Column 1 of Schedule 10 for the discharger's plant. O. Reg. 523/95, s. 8.

(2) A discharger need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994; and

(b) the discharger notifies the Director in writing, by February 15, 1996, that the plant meets the exemption criteria referred to in clause (a).

(3) Subject to subsection (4), a discharger shall complete the storm water control study in respect of the discharger's plant by February 17, 1997.

(4) A discharger may postpone completion of the storm water control study in respect of the discharger's plant until February 15, 1999 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, by February 17, 1997, of the plans referred to in clause (a).

(5) Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger's plant, on request during the plant's normal office hours. O. Reg. 64/95, s. 36 (2-5).

PART VIII
RECORDS AND REPORTS

RECORD KEEPING

37. (1) Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 19 to 23, 25, 32, 33 and 33.1, all calculations performed under sections 12 to 15, and all determinations and calculations made or performed under sections 34 and 35. O. Reg. 64/95, s. 37 (1); O. Reg. 523/95, s. 9 (1).

(2) Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 7, including, for each sample, the date, the time of pick-up, the sampling procedures used and any incidents likely to affect the analytical results.

(3) Each discharger shall keep records of the results of all monitoring performed under sections 24, 26, 27 and 31.

(4) Each discharger shall keep records of all maintenance and calibration procedures performed under section 34.

(5) Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction and including a description of any remedial action taken.

(6) Each discharger shall keep records of any incident in which effluent that would ordinarily flow past a sampling point established under this Regulation is discharged from the discharger's plant without flowing past that sampling point, stating the date, duration, cause and nature of each incident.

(7) Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger's plant.

(8) Beginning on March 1, 1995, each discharger shall calculate and keep records of the reference daily rate of production, in tonnes, for each material listed in Schedule 10 for the discharger's plant. O. Reg. 64/95, s. 37 (2-8).

(9) Beginning on March 1, 1995, each discharger shall calculate and keep records of monthly average daily production, in tonnes, of each material listed in Schedule 11 for the discharger's plant, for each month. O. Reg. 64/95, s. 37 (9); O. Reg. 523/95, s. 9 (2).

(10) For the purposes of subsection (9), the monthly average daily production of a material for a month at the discharger's plant is the amount of the material, calculated in tonnes, that is produced at the discharger's plant during the month, divided by the number of days in the month.

(11) For the purposes of subsection (8), the reference daily rate of production for a material at the discharger's plant is the arithmetic mean of the amounts calculated under subsection (9) for the material for the first 12 months for which the discharger is required to keep a record for the material under subsection (9).

(12) Subject to subsection (13), each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(13) Each discharger shall keep each record required by subsections (8) and (9) for a period of 10 years.

(14) Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger's plant, on request during the plant's normal office hours. O. Reg. 64/95, s. 37 (10-14).

REPORTS AVAILABLE TO THE PUBLIC

38. (1) On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of plant loadings calculated under sections 12 to 15;

(b) a summary of batch stream loadings calculated under section 13;

(c) a summary of the results of monitoring performed under sections 19 to 23, 25 to 27 and 31 to 33.1;

(d) a summary of calculations performed under subsections 35 (1), (4) and (7);

(e) a summary of the loadings or other results that exceeded a limit under section 16 or 17; and

(f) a summary of the incidents in which effluent that would ordinarily flow past a sampling point established under this Regulation is discharged from the discharger's plant without flowing past that sampling point. O. Reg. 64/95, s. 38 (1); O. Reg. 523/95, s. 10.

(2) Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger's plant, on request, during the plant's normal office hours.

(3) Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1).

(4) Each discharger shall ensure that each report prepared under section 30 is available to any person at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 64/95, s. 38 (2-4).

REPORTS TO THE DIRECTOR — GENERAL

39. (1) Each discharger shall notify the Director in writing of any change of name or ownership of the discharger's plant occurring after February 14, 1995, within 30 days after the end of the month in which the change occurs.

(2) Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger's plant, within 30 days of the change or redirection.

(3) A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week's duration. O. Reg. 64/95, s. 39 (1-3).

(4) Each discharger shall notify the Director in writing if the discharger's plant has, for 90 consecutive days, produced a material listed in Schedule 11 for the discharger's plant at less than 75 per cent of the reference daily rate of production calculated under subsection 37 (8) for the material, within 30 days of the end of the 90-day period. O. Reg. 64/95, s. 39 (4); O. Reg. 523/95, s. 11.

REPORTS TO THE DIRECTOR — COMPLIANCE WITH SECTION 6 AND PART IV

40. (1) Each discharger shall report to the Director any incident in which effluent that would ordinarily flow past a point established under this Regulation is discharged from the discharger's plant without flowing past that sampling point.

(2) Each discharger shall report to the Director any loading or other result that exceeds a limit prescribed by section 16 or 17.

(3) A report required under subsection (1) or (2) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 64/95, s. 40.

QUARTERLY REPORTS TO THE DIRECTOR

41. (1) No later than 45 days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger's plant throughout the quarter as required by subsections (3) to (8).

(2) A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format and signed by the discharger.

(3) A report under this section shall include all information included in a report given under section 40 during the quarter.

(4) Each discharger shall report, for each month in the quarter,

(a) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 12 for each limited parameter;

(b) the highest and lowest batch stream loadings calculated under section 13 for each limited parameter;

(c) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 14 for each merged parameter;

(d) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 15 for each assessment parameter.

(5) Each discharger shall report, for each month in the quarter,

(a) the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under section 35;

(b) the highest and lowest process effluent batch volumes calculated under subsection 34 (5);

(c) the monthly average merged effluent plant volume and the highest and lowest daily merged effluent plant volumes calculated under section 35; and

(d) the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under section 35.

(6) Each discharger shall, for each sampling point established under this Regulation at the discharger's plant, report the number of days in each month in the quarter on which effluent flowed past the sampling point. O. Reg. 64/95, s. 41 (1-6).

(6.1) Each discharger shall, for each process effluent batch sampling point established under this Regulation at the discharger's plant, report the number of times in each month in the quarter on which effluent flowed past the sampling point. O. Reg. 523/95, s. 12 (1).

(7) Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 25 for each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger's plant. O. Reg. 64/95, s. 41 (7).

(8) Each discharger shall report, for each month in the quarter, the highest and lowest pH results and the highest and lowest specific conductance results obtained under,

(a) section 33 for each merged effluent monitoring stream at the discharger's plant; and

(b) section 33.1 for each cooling water effluent monitoring stream at the discharger's plant.

(9) Each discharger shall report, for each quarter, the results obtained under subsection 21 (1) in respect of each specific parameter for each process effluent sampling point at the discharger's plant. O. Reg. 523/95, s. 12 (2).

REPORTS TO THE DIRECTOR — CHRONIC TOXICITY TESTING

42. (1) Each discharger shall report to the Director the results of all monitoring performed under section 31, together with the date on which each sample was picked up, no later than 60 days after the end of each semi-annual period in which the monitoring was performed.

(2) A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 64/95, s. 42.

43. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 64/95, s. 43.

44. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 64/95, s. 44.

SCHEDULE 1
LIST OF REGULATED PLANTS

Plant Name	Location	Owner as of January 1, 1998

Albright & Wilson Americas Inc.	Port Maitland	Albright & Wilson Americas Inc.
AlliedSignal	Amherstburg	AlliedSignal Canada Inc.
Cabot Canada Ltd.	Sarnia	Cabot Canada Ltd.
Columbian Chemicals Canada Ltd.	Hamilton	Columbian Chemicals Canada Ltd.
Cytec Canada Inc.	Niagara Falls	Cytec Canada Inc.
The Exolon-ESK Company of Canada, Ltd.	Niagara Falls	The Exolon-ESK Company of Canada Ltd.
ETI Explosives Technologies International (Canada), Ltd.	North Bay	ETI Explosives Technologies International (Canada), Ltd.
General Chemical Canada Ltd.	Amherstburg	General Chemical Canada Ltd.
Hydro-Agri (formerly: Nutrite Inc.)	Maitland	Hydro Agri Canada
ICI Canada Inc.	Cornwall	ICI Canada Inc.
ICI Canada Inc. - Conpak	Cornwall	ICI Canada Inc.
International Minerals & Chemical Corporation (Canada) Limited	Port Maitland	International Minerals & Chemical Corporation (Canada) Limited
Liquid Carbonic Inc.	Maitland	Liquid Carbonic Inc.
Norton Advanced Ceramics of Canada Inc.	Niagara Falls	Norton Advanced Ceramics of Canada Inc.
Partek Insulations Ltd.	Sarnia	Partek Insulations Ltd.
Praxair Canada Inc.	Mooretown	Praxair Canada Inc.
Praxair Canada Inc.	Sarnia	Praxair Canada Inc.
Praxair Canada Inc.	Sault Ste. Marie	Praxair Canada Inc.
Puritan Bennett Corporation	Maitland	Puritan-Bennett Canada Ltd.
Sulco Chemicals Limited	Elmira	Sulco Chemicals Limited
Terra International (Canada) Inc.	Courtright	Terra International (Canada) Inc.
UCAR Inc.	Welland	UCAR Inc.
Washington Mills Electro Minerals Corporation	Niagara Falls	Washington Mills Electro Minerals Corporation
Washington Mills Limited	Niagara Falls	Washington Mills Limited
Welland Chemical Limited	Sarnia	Welland Chemical Limited

O. Reg. 51/98, s. 1.

SCHEDULE 2
PROCESS EFFLUENT: DESIGNATED SAMPLING POINTS, LIMITS, MONITORING FREQUENCY

PLANT: Albright & Wilson Americas Inc. (Port Maitland)				
Designated Process Effluent Sampling Point: 0100, Final Discharge to Canal				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	210	30
6	Total phosphorus	D	2.4	0.93
8	Total suspended solids	D	170	48
I2	Mercury	Q	0.0025	-
I4	Phenolics	W	0.12	0.048

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Cabot Canada Ltd. (Sarnia)				
Designated Process Effluent Sampling Point: 0100, Discharge from Filter Bed to Cole Drain				
ATG	Parameter	Monitoring Frequency	Daily Plan Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4b	Nitrate+Nitrite	Q	3.2	-
5a	DOC	W	29	10
6	Total phosphorus	Q	0.87	-

8	Total suspended solids	D	48	15
9	Aluminum	W	3.5	2.2
9	Zinc	Q	1.4	-
25	Oil and grease	Q	17	-
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Cytec Canada Inc. (Niagara Falls)				
Designated Process Effluent Sampling Point: 0400, Sludge Pond to Final Discharge				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
2	Cyanide Total	W	0.13	0.05
4a	Ammonia plus Ammonium	W	10	3.4
4b	Nitrate+Nitrite	W	32	10
4a	Total Kjeldahl nitrogen	W	9.7	3.6
5a	DOC	W	75	27
6	Total phosphorus	D	5.0	1.9
8	Total suspended solids	D	150	21
17	Toluene	W	0.12	0.046
25	Oil and grease	Q	8.4	-
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: The Exolon-ESK Company of Canada, Ltd. (Niagara Falls)				
Designated Process Effluent Sampling Point: 0100, 24 Inch Outfall at Beaver Dam Road				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	99	14
6	Total phosphorus	W	2.8	1.0
8	Total suspended solids	D	160	79
9	Aluminum	W	2.6	1.1

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: General Chemical Canada Ltd. (Amherstburg)				
Designated Process Effluent Sampling Points: 0100, North Drain Effluent to Detroit River 0200, Main Drain Effluent to Detroit River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
2	Cyanide Total	Q	6.3	-
4a	Ammonia plus Ammonium	D	2900	650
4b	Nitrate+Nitrite	Q	750	-
4a	Total Kjeldahl nitrogen	W	2400	890
5a	DOC	W	2900	1200
6	Total phosphorus	Q	64	-
8	Total suspended solids	D	43,000	11,000
9	Molybdenum	Q	10	-
10	Arsenic	Q	5.2	-
12	Mercury	Q	0.026	-
15	Sulphide	Q	6.3	-
16	Chloroform	Q	0.24	-
25	Oil and grease	Q	1400	-
30	Chloride	W	1,360,000	1,100,000
30	Fluoride	W	131	95
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

ATG	Analytical Test Group
TEQ	total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day	kilograms per day
D	Daily monitoring requirement
W	Weekly monitoring requirement
Q	Quarterly monitoring requirement

PLANT: Hydro Agri Maitland (formerly Nutrite Inc.) Maitland				
Designated Process Effluent Sampling Point: 0400, Final Effluent to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	D	82	26
4b	Nitrate+Nitrite	D	80	27
4a	Total Kjeldahl nitrogen	D	83	27
5a	DOC	W	28	15
6	Total phosphorus	W	5.5	1.1
8	Total suspended solids	D	128	28
9	Aluminum	W	2.1	0.38
9	Copper	Q	0.14	-
9	Vanadium	Q	1.21	-
9	Zinc	W	0.14	0.03
12	Mercury	Q	0.0006	-
14	Phenolics (4AAP)	W	0.0087	0.0045
16	Tetrachloroethylene	Q	0.16	-
25	Oil and grease	W	12	5
27	PCBT	Q	0.00036	-
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

ATG	Analytical Test Group

TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: ICI Canada Inc. (Cornwall)				
Designated Process Effluent Sampling Point: 0400, Effluent in Manhole #15 to LEL-2				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4b	Nitrate+Nitrite	Q	0.90	-
5a	DOC	W	9.6	4.2
6	Total phosphorus	Q	1.1	-
8	Total suspended solids	D	24	4.3
9	Aluminum	W	0.43	0.078
9	Copper	Q	0.016	-
9	Lead	Q	0.23	-
9	Nickel	Q	0.010	-
9	Zinc	Q	0.056	-
10	Arsenic	Q	0.0050	-
12	Mercury	D	0.0058	0.0012
14	Phenolics (4AAP)	Q	0.0042	-
23	1,2,4-Trichlorobenzene	W	0.00034	0.00013
23	Hexachlorobenzene	W	0.00016	0.000060
23	Hexachlorobutadiene	W	0.00029	0.00010
23	Hexachloroethane	W	0.0011	0.00040
23	Octachlorostyrene	Q	0.000070	-
23	Pentachlorobenzene	Q	0.000010	-
25	Oil and grease	Q	6.7	-
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: ICI Canada Inc. - Conpak (Cornwall)				
Designated Process Effluent Sampling Point: 0100, Effluent from Conpak to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	0.55	0.19
4b	Nitrate+Nitrite	W	1.3	0.29
4a	Total Kjeldahl nitrogen	W	0.55	0.21
5a	DOC	W	2.7	0.57
6	Total phosphorus	W	0.29	0.044
8	Total suspended solids	D	6.7	1.1
9	Aluminum	W	0.27	0.042
9	Cadmium	W	0.00046	0.00011
9	Chromium	W	0.055	0.0087
9	Copper	W	0.013	0.0023
9	Lead	W	0.027	0.0034
9	Nickel	W	0.12	0.0023
9	Zinc	W	0.0019	0.00038

10	Selenium	Q	0.0027	-
12	Mercury	W	0.00057	0.00011
14	Phenolics (4AAP)	W	0.0012	0.00032
16	Carbon tetrachloride	W	0.0055	0.0021
16	Chloroform	W	0.015	0.00030
23	Hexachlorobenzene	W	0.000076	0.000019
23	Hexachloroethane	W	0.00038	0.00013
25	Oil and grease	Q	1.3	-
30	Chloride	W	323	82
30	Sulphate	W	228	34
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

ATG	Analytical Test Group
TEQ	total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day	kilograms per day
D	Daily monitoring requirement
W	Weekly monitoring requirement
Q	Quarterly monitoring requirement

PLANT: International Minerals & Chemical Corporation (Canada) (Port Maitland)

Designated Process Effluent Sampling Point:
0300, Final Effluent to River

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	Q	41	-
4b	Nitrate+Nitrite	Q	25	-
4a	Total Kjeldahl nitrogen	Q	30	-
5a	DOC	Q	68	-
6	Total phosphorus	D	7.9	4.5
8	Total suspended solids	D	250	51
14	Phenolics (4AAP)	Q	0.16	-
25	Oil and grease	Q	10	-
30	Fluoride	D	76	57
30	Sulphate	Q	13,000	-

PLANT: Liquid Carbonic Inc. (Maitland)

Designated Process Effluent Sampling Point:
0100, Effluent to River

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Nitrate + Nitrite	W	22	15
5a	DOC	W	190	46
6	Total phosphorus	Q	0.87	-
8	Total suspended solids	D	44	22
25	Oil and grease	W	35	13

Explanatory Notes:

ATG	Analytical Test Group
kg/day	kilograms per day
D	Daily monitoring requirement
W	Weekly monitoring requirement
Q	Quarterly monitoring requirement

PLANT: Norton Advanced Ceramics of Canada Inc. (Niagara Falls)

Designated Process Effluent Sampling Points:
0300, Sewer C to Welland River
0400, Sewer D to Welland River

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	34	16
6	Total phosphorus	Q	2.4	-
8	Total suspended solids	D	450	100
9	Aluminum	W	15	3.9
25	Oil and grease	Q	24	-
30	Sulphate	W	1900	770

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Praxair Canada Inc. (Mooretown)				
Designated Process Effluent Sampling Point: 0100, Final Effluent to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	1.1	0.17
6	Total phosphorus	W	0.095	0.015
8	Total suspended solids	D	0.90	0.14
9	Aluminum	W	0.014	0.0052
9	Copper	Q	0.0038	-
9	Zinc	W	0.020	0.0066
25	Oil and grease	W	0.11	0.047
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Praxair Canada Inc. (Sarnia)				
Designated Process Effluent Sampling Point: 0100, Effluent from Cooling Towers to Cole Drain				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	1.3	0.42
6	Total phosphorus	W	0.24	0.043
8	Total suspended solids	D	2.8	0.46
9	Aluminum	W	0.058	0.022
9	Copper	W	0.0070	0.0031
9	Zinc	W	0.013	0.0065
25	Oil and grease	W	0.33	0.14
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

PLANT: Praxair Canada Inc. (Sault Ste. Marie)
Designated Process Effluent Sampling Point:

0100, Outfall at Safety Drive to River				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	9.0	2.9
6	Total phosphorus	W	1.7	0.30
8	Total suspended solids	D	20	3.3
9	Aluminum	W	0.42	0.15
9	Copper	W	0.045	0.020
9	Zinc	W	0.090	0.046
25	Oil and grease	W	2.1	0.92
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Puritan Bennett Corporation (Maitland)				
Designated Process Effluent Sampling Point: 0100, Effluent to Creek				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	3.9	1.3
4b	Nitrate+Nitrite	W	2.9	1.8
4a	Total Kjeldahl nitrogen	W	3.1	1.2
5a	DOC	W	1.6	1.0
6	Total phosphorus	Q	0.11	-
8	Total suspended solids	D	5.4	2.7

PLANT: Sulco Chemicals Limited (Elmira)				
Designated Process Effluent Sampling Point: 0100, Final Effluent to Creek				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
2	Cyanide Total	Q	0.014	-
5a	DOC	W	1.4	0.63
6	Total phosphorus	W	0.20	0.082
8	Total suspended solids	D	2.9	1.2
9	Aluminum	Q	0.085	-
9	Cadmium	Q	0.0016	-
9	Copper	Q	0.013	-
9	Nickel	Q	0.022	-
9	Vanadium	Q	0.040	-
9	Zinc	Q	0.075	-
10	Arsenic	Q	0.0014	-
14	Phenolics (4AAP)	Q	0.0024	-
25	Oil and grease	Q	0.96	-
30	Chloride	W	270	140
30	Fluoride	W	1.6	0.42
30	Sulphate	W	610	150

Explanatory Notes:
ATG Analytical Test Group

kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Terra International (Canada) Inc. (Courtright)

Designated Process Effluent Sampling Points:
0500, Effluent from 30 inch concrete pipe flowing into Plant Final Discharge to St. Clair River
0700, Effluent in Manhole #55 flowing into Plant Final Discharge to St. Clair River
0800, Effluent in 42 inch Line from A-11 flowing into Plant Final Discharge to St. Clair River

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	D	290	140
4b	Nitrate+Nitrite	D	650	150
4a	Total Kjeldahl nitrogen	D	540	250
5a	DOC	W	1100	510
6	Total phosphorus	Q	46	-
8	Total suspended solids	D	3500	880
9	Aluminum	Q	8.9	-
9	Zinc	Q	12	-
14	Phenolics (4AAP)	W	7.4	2.6
30	Fluoride	Q	4.0	-
30	Sulphate	Q	2700	-

PLANT: Washington Mills Electro Minerals Corporation (Niagara Falls)

Designated Process Effluent Sampling Points:
0100, Effluent from Queen Lagoon to Welland River
0200, Effluent from the Old Lagoon to Welland River

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	81	33
6	Total phosphorus	Q	2.2	-
8	Total suspended solids	D	395	127
9	Aluminum	W	6.1	2.7
25	Oil and grease	Q	19	-

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Washington Mills Limited (Niagara Falls)

Designated Process Effluent Sampling Point:
0100, Final Effluent to River

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
5a	DOC	W	24	7.8
6	Total phosphorus	Q	0.58	-
8	Total suspended solids	D	60	18
9	Aluminum	W	3.0	1.1
25	Oil and grease	W	14	5.8

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement

W Weekly monitoring requirement
Q Quarterly monitoring requirement

O. Reg. 51/98, s. 1.

SCHEDULE 3
ANALYTICAL REQUIREMENTS AT PLANTS WITH MORE THAN ONE PROCESS EFFLUENT SAMPLING POINT

PLANT: General Chemical Canada Ltd. (Amherstburg)			
ATG	Parameter	Control Points	
		0100	0200
	Column 1	Column 2	Column 3
2	Cyanide Total	-	X
4a	Ammonia plus Ammonium	X	X
4b	Nitrate+Nitrite	-	X
4a	Total Kjeldahl nitrogen	X	X
5a	DOC	X	X
6	Total phosphorus	X	X
8	Total suspended solids	X	X
9	Molybdenum	X	-
10	Arsenic	X	-
12	Mercury	X	-
15	Sulphide	X	-
16	Chloroform	X	-
25	Oil and grease	X	X
30	Chloride	X	X
30	Fluoride	X	-
24	2,3,7,8-tetrachlorodibenzo-para-dioxin	X	X
	2,3,7,8-tetrachlorodibenzofuran	X	X
	TEQ	X	X

Explanatory Notes:
ATG Analytical Test Group
TEQ total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Norton Advanced Ceramics of Canada Inc. (Niagara Falls)			
ATG	Parameter	Control Points	
		0300	0400
	Column 1	Column 2	Column 3
5a	DOC	X	X
6	Total phosphorus	X	X
8	Total suspended solids	X	X
9	Aluminum	X	X
25	Oil and grease	X	X
30	Sulphate	X	-

Explanatory Notes:
ATG Analytical Test Group
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Washington Mills Electro Minerals Corporation (Niagara Falls)			
ATG	Parameter	Control Points	
		0100	0200
	Column 1	Column 2	Column 3
5a	DOC	X	X
6	Total phosphorus	X	X
8	Total suspended solids	X	X
9	Aluminum	X	X
25	Oil and grease	X	X

Explanatory Notes:
ATG Analytical Test Group

X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

O. Reg. 51/98, s. 1.

SCHEDULE 4
PROCESS EFFLUENT BATCH: DESIGNATED SAMPLING POINTS, LIMITS, MONITORING FREQUENCY

PLANT: Welland Chemical Limited (Sarnia)			
Designated Process Effluent Batch Sampling Point: 0200, Effluent from #1 Lagoon			
ATG	Parameter	Monitoring Frequency	Batch Loading Limit
			kg/batch
	Column 1	Column 2	Column 3
4a	Nitrate+Nitrite	B	0.57
5a	DOC	B	9.8
6	Total phosphorus	B	0.051
8	Total suspended solids	B	5.5
9	Aluminum	B	0.12
16	Chloroform	B	0.27

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
B Process Effluent Batch — batch monitoring requirement

O. Reg. 51/98, s. 1.

SCHEDULE 5
MERGED EFFLUENT: DESIGNATED SAMPLING POINTS, MONITORING FREQUENCY

PLANT: Cytec Canada Inc. (Niagara Falls)		
Designated Merged Effluent Sampling Point: 0200, Miller's Creek Final Discharge to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
4a	Ammonia plus Ammonium	W
4b	Total Kjeldahl Nitrogen	W
4a	Nitrate plus Nitrite	W
6	Total phosphorus	W
8	Total suspended solids	W
25	Oil and grease	W

PLANT: ICI Canada Inc. (Cornwall)		
Designated Merged Effluent Sampling Point: 0300, Effluent in LEL-2 to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
8	Total suspended solids	W
25	Oil and grease	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement

PLANT: Terra International (Canada) Inc. (Courtright)		
Designated Merged Effluent Sampling Point: 0200, Main Effluent to River		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
4a	Ammonia plus Ammonium	W
4b	Total Kjeldahl Nitrogen	W

4a	Nitrate plus Nitrite	W
6	Total phosphorus	W
8	Total suspended solids	W
9	Aluminum	Q
9	Zinc	Q
14	Phenolics	W
25	Oil and grease	W
30	Fluoride	Q
30	Sulphate	Q

O. Reg. 51/98, s. 1.

SCHEDULE 6
COOLING WATER EFFLUENT: DESIGNATED SAMPLING POINTS, MONITORING FREQUENCY

PLANT: ETI Explosives Technologies International (Canada), Ltd. (North Bay)		
Designated Cooling Water Effluent Sampling Point: 0100, Discharge at Weir to Lake		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
4a	Ammonia plus Ammonium	W
4a	Total Kjeldahl Nitrogen	W
4b	Nitrate plus Nitrite	W
8	Total suspended solids	W
25	Oil and grease	W

PLANT: UCAR Inc. (Welland)		
Designated Cooling Water Effluent Sampling Point: 0100, #2 Weir Effluent to Canal		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
8	Total suspended solids	W
25	Oil and grease	W

PLANT: Welland Chemical Limited (Sarnia)		
Designated Cooling Water Sampling Points: 0300, Effluent from Chlorine Filling Unit 0400, Effluent from East Wall of Aluminum Chloride Building 0500, Effluent from South Wall of Aluminum Chloride Building		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
8	Total suspended solids	W
25	Oil and grease	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement

O. Reg. 51/98, s. 1.

SCHEDULE 7
ACUTE LETHALITY: SAMPLING POINTS

Plant Name	Sampling Point - Number and Description
Albright & Wilson Americas Inc.	0100 , Final Discharge to Canal (Process Effluent)
AlliedSignal	0300 , Discharge to General Chemical Settling basins (Process Effluent)
Cabot Canada Ltd.	0100 , Discharge from Filter Bed to Cole Drain (Process Effluent)
Cytec Canada Inc.	0200 , Miller's Creek Final Discharge to River (Merged Effluent)
The Exolon-ESK Company of Canada, Ltd.	0100 , 24 Inch Outfall at Beaver Dam Road (Process Effluent)
ETI Explosives Technologies International (Canada), Ltd.	0100 , Discharge at Weir to Lake (Cooling Water)
General Chemical Canada Ltd.	0200 , Main Drain Effluent to Detroit River (Process Effluent)
Hydro Agri (Maitland)	0400 , Final Effluent to River (Process Effluent)
ICI Canada Inc.	0300 , Effluent in LEL-2 to River (Merged Effluent)

ICI Canada Inc. - Conpak	0100 , Effluent from Conpak to River (Process Effluent)
International Minerals & Chemical Corporation (Canada) Limited	0300 , Final Effluent to River (Process Effluent)
Liquid Carbonic Inc. (Maitland)	0100 , Effluent to River (Process Effluent)
Norton Advanced Ceramics of Canada Inc.	0300 , Sewer C to Welland River (Process Effluent) 0400 , Sewer D to Welland River (Process Effluent)
Praxair Canada Inc. (Mooretown)	0100 , Final Effluent to River (Process Effluent)
Praxair Canada Inc. (Sarnia)	0100 , Effluent from Cooling Towers to Cole Drain (Process Effluent)
Praxair Canada Inc. (Sault Ste. Marie)	0100 , Outfall at Safety Drive to River (Process Effluent)
Puritan Bennett Corporation	0100 , Effluent to Creek (Process Effluent)
Sulco Chemical Limited	0100 , Final Effluent to Creek (Process Effluent)
Terra International (Canada) Inc.	0200 , Main Effluent to River (Merged Effluent)
UCAR Inc.	0100 , #2 Weir Effluent to Canal (Cooling Water)
Washington Mills Electro Minerals Corporation	0100 , Effluent from Queen Lagoon to Welland River (Process Effluent) 0200 , Effluent from the Old Lagoon to Welland River (Process Effluent)
Washington Mills Limited	0100 , Final Effluent to River (Process Effluent)
Welland Chemical Limited	0200 , Effluent from #1 Lagoon (Process Effluent Batch) 0300 , Effluent from Chlorine Filling Unit (Cooling Water) 0400 , Effluent from East Wall of Aluminum Chloride Building (Cooling Water) 0500 , Effluent from South Wall of Aluminum Chloride Building (Cooling Water)

O. Reg. 51/98, s. 1.

SCHEDULE 8
ACUTE LETHALITY TESTING: SAMPLING POINTS

Plant Name	Sampling Point - Number and Description
Cytec Canada Inc.	0400 , Sludge Pond to Final Discharge
ICI Canada Inc.	0400 , Effluent in Manhole #15 flowing into LEL-2
Terra International (Canada) Inc	0500 , Effluent from 30 inch Concrete Pipe flowing into Plant Final Discharge 0700 , Effluent in Manhole #55 flowing into Plant Final Discharge 0800 , Effluent in 42 inch Line from A-11 flowing into Plant Final Discharge

O. Reg. 51/98, s. 1.

SCHEDULE 9
CHRONIC TOXICITY TESTING: SAMPLING POINTS

Plant Name	Sampling Point - Number and Description
Albright & Wilson Americas Inc.	0100 , Final Discharge to Canal (Process Effluent)
Cabot Canada Ltd.	0100 , Discharge from Filter Bed to Cole Drain (Process Effluent)
Cytec Canada Inc.	0200 , Miller's Creek Final Discharge (Merged Effluent)
The Exolon-ESK Company of Canada, Ltd.	0100 , 24 Inch Outfall at Beaver Dam Road (Process Effluent)
General Chemical Canada Ltd.	0200 , Main Drain Effluent to Detroit River (Process Effluent)
ICI Canada Inc.	0300 , Effluent in LEL-2 to River (Merged Effluent)
ICI Canada Inc. - Conpak	0100 , Effluent from Conpak to River (Process Effluent)
International Minerals & Chemical Corporation (Canada) Limited	0300 , Final Effluent to River (Process Effluent)
Liquid Carbonic Inc. (Maitland)	0100 , Effluent to River (Process Effluent)
Norton Advanced Ceramics of Canada Inc.	0300 , Sewer C to Welland River (Process Effluent) 0400 , Sewer D to Welland River (Process Effluent)
Nutrite Inc. (Maitland)	0400 , Final Effluent to River (Process Effluent)
Praxair Canada Inc. (Mooretown)	0100 , Final Effluent to River (Process Effluent)
Praxair Canada Inc. (Sarnia)	0100 , Effluent from Cooling Towers to Cole Drain (Process Effluent)
Praxair Canada Inc. (Sault Ste. Marie)	0100 , Outfall at Safety Drive to River (Process Effluent)
Puritan Bennett Corporation	0100 , Effluent to Creek (Process Effluent)
Sulco Chemical Limited	0100 , Final Effluent to Creek (Process Effluent)
Terra International (Canada) Inc.	0200 , Main Effluent to River (Merged Effluent)
Washington Mills Electro Minerals Corporation	0100 , Effluent from Queen Lagoon to Welland River (Process Effluent) 0200 , Effluent from the Old Lagoon to Welland River (Process Effluent)
Washington Mills Limited	0100 , Final Effluent to River (Process Effluent)
Welland Chemical Limited	0200 , Effluent from #1 Lagoon (Process Effluent Batch)

O. Reg. 51/98, s. 1.

SCHEDULE 10
STORM WATER CONTROL STUDY PARAMETERS

PLANT: Columbian Chemicals Canada Ltd. (Hamilton)

ATG	Parameter
	Column 1
3	pH
4a	Ammonia plus Ammonium
4a	Total Kjeldahl Nitrogen
4b	Nitrate plus Nitrite
5a	Dissolved Organic Carbon
6	Total phosphorus
8	Total suspended solids
9	Aluminum Boron Lead Zinc
14	Phenolics (4AAP)
15	Sulphides
24	2,3,7,8-tetrachlorodibenzo-para-dioxin 2,3,7,8-tetrachlorodibenzofuran TEQ
25	Oil and grease

Explanatory Notes:
ATG Analytical Test Group

PLANT: Partek Insulations Ltd., Sarnia	
ATG	Parameter
	Column 1
8	Total suspended solids
25	Oil and grease

Explanatory Notes:
ATG Analytical Test Group

O. Reg. 51/98, s. 1.

SCHEDULE 11
REFERENCE MATERIALS

Plant Name	Materials
Albright & Wilson Americas Inc.	•Phosphoric Acid •Sodium and Potassium Phosphates
AlliedSignal	•Hydrofluoric Acid
Cabot Canada Ltd.	•Carbon Black
Cytec Canada Inc.	•Phosphine and Derivatives
The Exolon-ESK Company of Canada, Ltd.	•Abrasives
General Chemical Canada Ltd.	•Soda Ash •Calcium Chloride
ICI Canada Inc.	•Chlorine
ICI Canada Inc. - Conpak	•Packaged Acids, Bases, Ammonia, and Chlorine
International Minerals & Chemical Corporation (Canada) Limited	•Shutdown Phosphate Fertilizer Facility - Storage Pond Drainage
Liquid Carbonic Inc. (Maitland)	•Carbon Dioxide
Norton Advanced Ceramics of Canada Inc.	•Abrasives
Nutrite Inc.	•Nitric Acid •Ammonium Nitrate •"Nitrogen" Solutions
Praxair Canada Inc.(Mooretown)	•Nitrogen Gas
Praxair Canada Inc.(Sarnia)	•Nitrogen Gas
Praxair Canada Inc.(Sault Ste. Marie)	•Oxygen, Nitrogen and Argon Gases
Puritan Bennett Corporation	•Nitrous Oxide
Sulco Chemicals Limited	•Sulphuric Acid •Packaged Acids
Terra International (Canada) Inc.	•Ammonia •Ammonium Nitrate •Urea •Nitric Acid •"Nitrogen" Solutions
Washington Mills Electro Minerals Corporation	•Abrasives
Washington Mills Limited	•Abrasives
Welland Chemical Limited	•Aluminum Chloride •Sodium Hypochlorite

O. Reg. 51/98, s. 1.

Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 214/95

No Amendments

EFFLUENT MONITORING AND EFFLUENT LIMITS — IRON AND STEEL MANUFACTURING SECTOR

Notice of Currency:* This document is up to date.

*This notice is usually current to within two business days of accessing this document. For more current amendment information, see the Table of Regulations (Legislative History).

This Regulation is made in English only.

PART I
GENERAL

INTERPRETATION

1. (1) In this Regulation,

"assessment parameter", in relation to a plant, means a parameter that is listed for the plant in Schedule 5;

"cooling water effluent monitoring stream" means a stream on which a sampling point is established under subsection 8 (3);

"cooling water effluent sampling point" means a sampling point established under subsection 8 (3);

"Director", in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger's plant is located and includes an alternate named by the Director;

"discharger" means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

"limited parameter", in relation to a plant, means a parameter for which a limit is specified in Column 3 or 4 of Schedule 2 for the plant;

"merged effluent monitoring stream" means a stream on which a sampling point is established under subsection 8 (2);

"merged effluent sampling point" means a sampling point established under subsection 8 (2);

"merged parameter", in relation to a plant, means a parameter that is listed for the plant in Schedule 4;

"pick up", in relation to a sample, means pick up for the purpose of storage, including storage within an automatic sampling device, and transportation to and analysis at a laboratory;

"plant" means an industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;

"process change" means a change in equipment, production processes, process materials or treatment processes;

"process effluent monitoring stream" means a stream on which a sampling point is established under subsection 8 (1);

"process effluent sampling point" means a sampling point established under subsection 8 (1);

"process materials", in relation to a discharger's plant, means raw materials for use in an industrial process at the plant, manufacturing intermediates produced at the plant, or products or by-products of an industrial process at the plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

"quarter" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"semi-annual period" means all or part of a period of six months beginning on the first day of January or July.

(2) For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(3) An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger's behalf. O. Reg. 214/95, s. 1.

PURPOSE

2. The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants listed in Schedule 1. O. Reg. 214/95, s. 2.

APPLICATION

3. (1) This Regulation applies only with respect to the plants listed in Schedule 1.

(2) This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer. O. Reg. 214/95, s. 3.

OBLIGATIONS UNDER APPROVALS, ORDERS, ETC.

4. For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 214/95, s. 4.

NON-APPLICATION OF THE GENERAL EFFLUENT MONITORING REGULATION

5. This Regulation is not a Sectoral Effluent Monitoring Regulation within the meaning of Ontario Regulation 695/88. O. Reg. 214/95, s. 5.

BY-PASSES

6. Beginning on April 13, 1998, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger's plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 214/95, s. 6.

SAMPLING AND ANALYTICAL PROCEDURES

7. (1) Each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.

(2) Each discharger shall maintain the sampling equipment used at the discharger's plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of each limited parameter, merged parameter and assessment parameter from the plant. O. Reg. 214/95, s. 7.

PART II
SAMPLING POINTS

ESTABLISHMENT AND ELIMINATION OF SAMPLING POINTS

8. (1) Each discharger shall, by July 12, 1995, establish a sampling point at each sampling point location designated as a process effluent sampling point in Schedule 2 for the discharger's plant.

(2) Each discharger shall, by July 12, 1995, establish a sampling point at each sampling point location designated as a merged effluent sampling point in Schedule 4 for the discharger's plant.

(3) Each discharger shall, by July 12, 1995, establish a sampling point at each sampling point location designated as a cooling water effluent sampling point in Schedule 5 for the discharger's plant.

(4) If the Director is satisfied, on the basis of written submissions from a discharger, that one or more of the circumstances described in subsection (5) exist at the discharger's plant, with the result that it is impractical to maintain or use a sampling point established at the plant under this Regulation, the Director may give the discharger written permission to eliminate the sampling point.

(5) For the purposes of subsection (4), the circumstances at the discharger's plant that might make it impractical to maintain or use a sampling point are the following:

1. A process change or redirection of or change in the character of an effluent stream has occurred or is expected to occur at the discharger's plant.
2. Equipment used for sampling or flow measurement at the sampling point is damaged or non-functional.
3. The effluent flowing in the stream on which the sampling point was established under this Regulation has been or is expected to be permanently eliminated.

(6) Where a discharger is permitted to eliminate a sampling point because of a circumstance described in paragraph 1 or 2 of subsection (5), the discharger shall, within 90 days after the day on which the sampling point is eliminated, establish a replacement sampling point.

(7) The replacement sampling point shall be established on the effluent stream from which the sampling point was eliminated, at a location approved in writing by the Director.

(8) The Director shall not approve a location for the replacement sampling point unless he or she is satisfied that monitoring at the new location would yield results that would reflect the level of discharge of each limited parameter, merged parameter and assessment parameter from the discharger's plant as reliably as did monitoring at the eliminated sampling point.

(9) A discharger who replaces a sampling point under subsection (6) has all the same obligations in connection with the replacement sampling point that the discharger had in connection with the eliminated sampling point. O. Reg. 214/95, s. 8.

REPORTS ON SAMPLING POINTS

9. (1) By July 24, 1995, each discharger shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger's plant as of July 12, 1995.

(2) Each discharger who eliminates a sampling point at the discharger's plant under subsection 8 (4) but is not required to replace the sampling point under subsection 8 (6) shall, within 30 days after the day on which a sampling point is eliminated, give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point.

(3) Within 30 days after replacing a sampling point under subsection 8 (6), the discharger shall give the Director a written notice describing the location of the replacement sampling point, together with a revised list and plot plan showing the replacement sampling point. O. Reg. 214/95, s. 9.

USE OF SAMPLING POINTS ESTABLISHED UNDER THIS PART

10. Except as permitted or required under section 24, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 214/95, s. 10.

PART III
CALCULATION OF LOADINGS AND CONCENTRATIONS

CALCULATION OF LOADINGS — GENERAL

11. (1) For the purposes of performing a calculation under sections 12, 13 and 14, a discharger shall use the actual analytical result obtained by the laboratory.

(2) Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994, the discharger shall use the value zero for the purpose of performing a calculation under sections 12, 13 and 14.

(3) Each discharger shall ensure that each calculation of a process effluent loading required by section 12 and each calculation of a merged effluent loading required by section 13 is performed as soon as reasonably possible after the analytical result on which the calculation is based becomes available to the discharger.

(4) Each discharger shall ensure that each calculation of a cooling water effluent loading required by section 14 is performed in time to comply with subsection 40 (4). O. Reg. 214/95, s. 11.

CALCULATION OF LOADINGS — PROCESS EFFLUENT

12. (1) Each discharger shall calculate, in kilograms, a daily process effluent stream loading for each limited parameter in each process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 33, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily process effluent plant loading for each limited parameter for each day for which the discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1), the daily process effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily process effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average process effluent stream loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average process effluent stream loading for a parameter for a month is the arithmetic mean of the daily process effluent stream loadings for the parameter calculated under subsection (1) for the month.

(8) Each discharger shall calculate, in kilograms, a monthly average process effluent plant loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger's plant for analysis for the parameter.

(9) For the purposes of subsection (8), a monthly average process effluent plant loading for a parameter for a month is the arithmetic mean of the daily process effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 214/95, s. 12.

CALCULATION OF LOADINGS — MERGED EFFLUENT

13. (1) Each discharger shall calculate, in kilograms, a daily merged effluent stream loading for each merged parameter in each merged effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 33, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily merged effluent plant loading for each merged parameter for each day for which the discharger is required to calculate a merged effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily merged effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily merged effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily merged effluent stream loading for a parameter for a day under subsection (1), the daily merged effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily merged effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average merged effluent stream loading for each merged parameter for each month in which a sample is collected under this Regulation more than once from a merged effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average merged effluent stream loading for a parameter for a month is the arithmetic mean of the daily merged effluent stream loadings for the parameter calculated under subsection (1) for the month.

(8) Each discharger shall calculate, in kilograms, a monthly average merged effluent plant loading for each merged parameter for each month in which a sample is collected under this Regulation more than once from a merged effluent monitoring stream at the discharger's plant for analysis for the parameter.

(9) For the purposes of subsection (8), a monthly average merged effluent plant loading for a parameter for a month is the arithmetic mean of the daily merged effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 214/95, s. 13.

CALCULATION OF LOADINGS — COOLING WATER

14. (1) Each discharger shall calculate, in kilograms, a daily cooling water effluent stream loading for each assessment parameter in each cooling water effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 33, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily cooling water effluent plant loading for each assessment parameter for each day for which the discharger is required to calculate a daily cooling water effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily cooling water effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily cooling water effluent stream loading for a parameter for a day under subsection (1), the daily cooling water effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily cooling water effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average cooling water effluent stream loading for each assessment parameter for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average cooling water effluent stream loading for a parameter for a month is the arithmetic mean of the daily cooling water effluent stream loadings for the parameter calculated under subsection (1) for the month.

(8) Each discharger shall calculate, in kilograms, a monthly average cooling water effluent plant loading for each assessment parameter for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger's plant for analysis for the parameter.

(9) For the purposes of subsection (8), a monthly average cooling water effluent plant loading for a parameter for a month is the arithmetic mean of the daily cooling water effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 214/95, s. 14.

CALCULATION OF CONCENTRATIONS — PROCESS EFFLUENT — OIL AND GREASE

15. (1) Each discharger shall calculate, in milligrams per litre, a monthly average concentration for the parameter oil and grease in each process effluent monitoring stream of the discharger for each month.

(2) For the purposes of subsection (1), a monthly average concentration for the parameter for a month is the arithmetic mean of the analytical results obtained for the parameter from the samples collected under section 20 from the stream for the month. O. Reg. 214/95, s. 15.

PART IV
PARAMETER AND LETHALITY LIMITS

PARAMETER LIMITS

16. (1) Each discharger shall ensure that each daily process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2.

(2) Each discharger shall ensure that each monthly average process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the monthly average plant loading limit specified for the parameter and the plant in Column 4 of Schedule 2.

(3) Each discharger shall ensure that each monthly average concentration calculated for the parameter oil and grease under section 15 in connection with the discharger's plant does not exceed 15 milligrams per litre.

(4) Subject to subsection (5), each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the pH value of any sample collected at a process effluent sampling point at the plant is within the range of 6.0 to 9.5.

(5) Throughout any day on which a discharger has used an alternate sampling point on a process effluent monitoring stream for sampling required by section 24, as permitted by subsections 24 (7) and (8), the discharger,

(a) shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

(b) need not comply with subsection (4) with respect to the stream. O. Reg. 214/95, s. 16.

LETHALITY LIMITS

17. Each discharger shall control the quality of each stream at the discharger's plant for which a sampling point is listed in Schedule 6, to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a sampling point listed in Schedule 6 for the plant, results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 214/95, s. 17.

PART V
MONITORING

MONITORING — GENERAL

18. (1) Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters, the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(2) A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(3) Subject to subsection (4), each discharger shall pick up all sets of samples required to be picked up at the discharger's plant under sections 19, 20, 21, 22, 31 and 32 between the hours of 7 a.m. and 10 a.m.

(4) If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger's plant are such that it would be impractical to pick up a set of samples from each sampling point established at the plant under this Regulation within the time period specified in subsection (3), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (3).

(5) Subject to subsections (6) and (7), where a discharger is required by section 19, 20, 21, 22, 31 or 32 to pick up a set of samples the discharger shall pick up a set collected over the 24-hour period immediately preceding the pick up.

(6) The 24-hour period referred to in subsection (5) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (3) or of a different three-hour period specified in a notice under subsection (4).

(7) Where a notice has been given under subsection (4) in respect of a plant specifying a time period longer than three hours, the 24-hour period referred to in subsection (5) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(8) If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (4) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (4) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 214/95, s. 18.

MONITORING — PROCESS EFFLUENT — DAILY

19. (1) Each discharger shall, on each day, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is daily.

(2) A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an "X" in the column for that sampling point in Schedule 3.

(3) A discharger need not meet the requirements of subsection (1) where it is impossible to do so because of sampling by a provincial officer. O. Reg. 214/95, s. 19.

MONITORING — PROCESS EFFLUENT — WEEKLY

20. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly.

(2) A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an "X" in the column for that sampling point in Schedule 3.

(3) There shall be an interval of at least four days between successive pick up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 214/95, s. 20.

MONITORING — MERGED EFFLUENT — WEEKLY

21. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each merged effluent sampling point at the plant and shall analyze each set of samples for the parameters for which the frequency of monitoring as set out in Column 2 of Schedule 4 for the discharger's plant is weekly.

(2) All samples collected and picked up at a plant under subsection (1) shall be collected and picked up on a day on which samples are picked up at the plant under subsection 20 (1). O. Reg. 214/95, s. 21.

MONITORING — MERGED EFFLUENT — QUARTERLY

22. (1) Each discharger shall, on one day in each quarter, on the day on which samples are picked up at the plant under subsection 20 (1), pick up a set of samples collected at each merged effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 4 for the discharger's plant, is quarterly.

(2) There shall be an interval of at least 45 days between successive pick up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a quarter shall be picked up on the same day in the quarter. O. Reg. 214/95, s. 22.

MONITORING — PROCESS EFFLUENT — QUALITY CONTROL

23. (1) On one day in each year after 1995, on a day on which samples are picked up at the plant under subsection 20 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 20 (1) at one process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly.

(2) Each discharger shall prepare a travelling blank and a travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.

(3) There shall be an interval of at least six months between successive pick up days at the plant under subsection (1). O. Reg. 214/95, s. 23.

MONITORING — PROCESS EFFLUENT — pH MEASUREMENT

24. (1) Each discharger shall, on each day, during the time period applicable to the plant under subsection 18 (3) or (4), collect a grab sample from each process effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH.

(2) Each discharger shall, within each 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) on each day, collect two more grab samples from each process effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH.

(3) There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a sampling point, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each day during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection in each day.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period.

(7) For the purposes of subsections (1) to (6), a discharger shall use either the sampling point established under subsection 8 (1) on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(8) Before using an alternate sampling point under subsection (7), a discharger shall give the Director,

(a) a written notice that,

(i) sets out the name of the alternate sampling point,

(ii) describes its location, and

(iii) assigns a number to it; and

(b) a revised version of the list and plot plan submitted under section 9 showing the alternate sampling point. O. Reg. 214/95, s. 24.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

25. (1) Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" dated July, 1990.

(2) Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) On one day in each month, each discharger shall collect and immediately pick up a grab sample at each process effluent sampling point listed in Schedule 6 for the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(4) All samples collected and picked up at a plant under subsection (3) shall be collected and picked up on a day on which samples are picked up at the plant under subsection 20 (1).

(5) There shall be an interval of at least 15 days between successive pick up days at the plant under subsection (3).

(6) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(7) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(8) Samples picked up at a plant under subsection (7) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(9) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (7) shall be picked up on a day on which samples are picked up at the plant under subsection 20 (1).

(10) There shall be an interval of at least 45 days between successive pick up days at the plant under subsection (7).

(11) All samples picked up under subsection (7) in a quarter shall be picked up on the same day in the quarter.

(12) If a rainbow trout acute lethality test performed under subsection (7) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (7) to (11) cease to apply in relation to samples from

that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further 12 consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

(13) A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger's plant, within 30 days after the day on which the change begins. O. Reg. 214/95, s. 25 (1-13).

(14), (15) REVOKED: O. Reg. 214/95, s. 25 (16).

(16) SPENT: O. Reg. 214/95, s. 25 (16).

(17) Subsections (2) to (16) apply with necessary modifications to each merged effluent sampling point listed in Schedule 6 for the discharger's plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 6 shall be deemed to be a reference to each merged effluent sampling point listed in Schedule 6 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to subsection 21 (1).

(18) Subsections (2) to (16) apply with necessary modifications to each cooling water effluent sampling point listed in Schedule 6 for the discharger's plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 6 shall be deemed to be a reference to each cooling water effluent sampling point listed in Schedule 6 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to subsection 31 (1). O. Reg. 214/95, s. 25 (17, 18).

MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

26. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*" dated July, 1990.

(2) Subsections 25 (2) to (18) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna.*

(3) Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger's plant under this section on a day on which the discharger collects a sample from the sampling point under section 25, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 25. O. Reg. 214/95, s. 26.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT — SAMPLING POINTS LISTED IN SCHEDULE 7

27. (1) Beginning on April 13, 1998, on one day in each month, on a day on which samples are picked up at the plant under section 20, each discharger shall collect and immediately pick up a grab sample at each sampling point that is listed in Schedule 7 for the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(2) Subsections 25 (1) and (2) apply with necessary modifications to each sample picked up at the discharger's plant under subsection (1).

(3) There shall be an interval of at least 15 days between successive pick up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a month shall be picked up on the same day in the month.

(5) Where a discharger has performed tests under subsection (1) for 12 consecutive months on samples collected from the same sampling point, the discharger is relieved of the obligations under subsection (1) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(6) Samples picked up at a plant under subsection (5) shall be picked up on a day on which samples are picked up at the plant under subsection (1).

(7) If no samples are being picked up at a plant under subsection (1) during a quarter, samples picked up at the plant during the quarter under subsection (5) shall be picked up on a day on which samples are picked up at the plant under section 20.

(8) There shall be an interval of at least 45 days between successive pick up days at the plant under subsection (5).

(9) All samples picked up under subsection (5) in a quarter shall be picked up on the same day in the quarter. O. Reg. 214/95, s. 27.

MONITORING — ACUTE LETHALITY — *DAPHNIA MAGNA* SAMPLING POINTS LISTED IN SCHEDULE 7

28. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*" dated July, 1990.

(2) Each *Daphnia magna* acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) Beginning on April 13, 1998, on one day in each month, on a day on which samples are picked up at the plant under section 20, each discharger shall collect and immediately pick up a grab sample at each sampling point that is listed in Schedule 7 for the discharger's plant and shall perform a *Daphnia magna* acute lethality test on each sample.

(4) There shall be an interval of at least 15 days between successive pick up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(6) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a *Daphnia magna* acute lethality test on each sample.

(7) Samples picked up at a plant under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(8) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (6) shall be picked up on a day on which samples are picked up at the plant under section 20.

(9) There shall be an interval of at least 45 days between successive pick up days at the plant under subsection (6).

(10) All samples picked up under subsection (6) in a quarter shall be picked up on the same day in the quarter. O. Reg. 214/95, s. 28.

MONITORING — ACUTE LETHALITY — TOXICITY ELIMINATION REPORTS

29. (1) If three consecutive rainbow trout acute lethality tests performed under subsection 27 (1) or (5) or under a combination of subsections 27 (1) and (5) on samples picked up at a sampling point result in the mortality of more than 50 per cent of the test rainbow trout, the discharger shall submit to the Director a toxicity elimination report with respect to the stream on which the sampling point is located.

(2) A toxicity elimination report with respect to the stream on which the sampling point is located shall set out the following information:

1. A detailed analysis of the causes and sources of the mortality of more than 50 per cent of the test rainbow trout at the sampling point.
2. A synopsis of any studies conducted to support the analysis.
3. A detailed description of the methods by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.
4. An evaluation of the technical feasibility of implementing, at the discharger's plant, each method described under paragraph 3 and a statement of which of the methods are technically feasible.
5. An estimate of the financial cost to the discharger of implementing each method identified as technically feasible under paragraph 3.

(3) Where a discharger is required by subsection (1) to submit a toxicity elimination report to the Director, the discharger shall submit the report to the Director no later than 12 months after the day on which the third of three consecutive rainbow trout acute lethality tests was performed that resulted in the mortality of more than 50 per cent of the test rainbow trout at the sampling point on the stream.

(4) In addition, where a discharger is required by subsection (1) to submit a toxicity elimination report with respect to a stream, the discharger shall submit to the Director annual toxicity elimination progress reports with respect to the stream, no later than the anniversary of the day on which the toxicity elimination report with respect to the stream was required to be submitted under subsection (3).

(5) A toxicity elimination progress report with respect to a stream shall set out the following information:

1. A detailed description of any methods, in addition to those described under paragraph 3 of subsection (2) with respect to the stream, by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.
2. An evaluation of the technical feasibility of implementing, at the discharger's plant, each method described under paragraph 1 and a statement of which of the methods are technically feasible.
3. An estimate of the financial cost to the discharger of implementing each method identified as technically feasible under paragraph 2.

(6) Where a discharger has performed three consecutive quarterly tests under subsection 27 (5) on samples collected from a stream in relation to which the discharger has obligations under subsection (4) and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (4) in relation to that stream.

(7) Where a discharger has been relieved by subsection (6) of the obligation to submit toxicity elimination progress reports in relation to a stream and three consecutive quarterly tests under subsection 27 (5) on samples collected from that stream result in the mortality of more than 50 per cent of the test rainbow trout, subsection (6) ceases to apply and the discharger shall instead comply with the requirements of subsection (4) relating to the stream, until a further three consecutive quarterly tests under subsection 27 (5) on samples collected from the stream result in mortality for no more than 50 per cent of the rainbow trout in each test.

(8) Subsections (1) to (7) apply with necessary modifications to *Daphnia magna* acute lethality tests performed under section 28 and, for the purpose,

(a) a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna*; and

(b) a reference to subsection 27 (1) shall be deemed to be a reference to subsection 28 (3) and a reference to subsection 27 (5) shall be deemed to be a reference to subsection 28 (6). O. Reg. 214/95, s. 29.

MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

30. (1) Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows" dated February, 1992.

(2) Where a discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*" dated February, 1992.

(3) On one day in each semi-annual period, on the day on which samples are picked up at the plant under section 20, each discharger shall collect and immediately pick up a grab sample from each sampling point listed in Schedule 8 for the discharger's plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

(4) There shall be an interval of at least 90 days between successive pick up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a semi-annual period shall be picked up on the same day in the semi-annual period.

(6) A discharger need not collect a sample from a sampling point in accordance with subsection (3) until 12 consecutive monthly rainbow trout acute lethality tests and 12 consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at a discharger's plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 214/95, s. 30.

MONITORING — COOLING WATER EFFLUENT — WEEKLY ASSESSMENT

31. (1) Each discharger shall, on one day in each week, on a day on which samples are picked up at the plant under subsection 20 (1), pick up a set of samples collected at each cooling water effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 5 for the discharger's plant, is weekly.

(2) A discharger for a plant referred to in Schedule 5 need not analyze any set of samples collected at a cooling water effluent sampling point for any parameter not marked with an "X" in the column for that sampling point in Schedule 5.

(3) There shall be an interval of at least four days between successive pick up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 214/95, s. 31.

MONITORING — COOLING WATER EFFLUENT — QUARTERLY

32. (1) Each discharger shall, on one day in each quarter, on a day on which samples are picked up at the plant under subsection 20 (1), pick up a set of samples collected at each cooling water effluent sampling point at the discharger's plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 5 for the discharger's plant, is quarterly.

(2) A discharger for a plant referred to in Schedule 5 need not analyze any set of samples collected at a cooling water effluent sampling point for any parameter not marked with an "X" in the column for that sampling point in Schedule 5.

(3) There shall be an interval of at least 45 days between successive pick up days at the plant under subsection (1).

(4) All samples picked up under subsection (1) in a quarter shall be picked up on the same day in the quarter. O. Reg. 214/95, s. 32.

PART VI
EFFLUENT VOLUME

FLOW MEASUREMENT

33. (1) For the purposes of this section, a volume of effluent for a stream for a day is the volume that flowed past the sampling point established under section 8 on the stream during the 24-hour period preceding the pick up of the first sample picked up from the stream for the day.

(2) Each discharger shall determine in cubic metres a daily volume of effluent for each process effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(3) Despite subsection (2), where a process effluent monitoring stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of the individual intermittent volume measurements.

(4) Each discharger shall use flow measurement methods that allow the daily volumes for process effluent monitoring streams to be determined to an accuracy of within plus or minus 15 per cent.

(5) Each discharger shall determine in cubic metres a daily volume of effluent for each merged effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(6) Each discharger shall use flow measurement methods that allow the daily volumes for merged effluent monitoring streams to be determined to an accuracy of within plus or minus 20 per cent.

(7) Each discharger shall determine in cubic metres a daily volume of effluent for each cooling water effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(8) Each discharger shall use flow measurement methods that allow the daily volumes for cooling water effluent monitoring streams to be determined to an accuracy of within plus or minus 20 per cent.

(9) Each discharger shall, no later than the day that this section comes into force, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that,

(a) each flow measurement method used under subsections (2) and (3) meets the accuracy requirements of subsection (4);

(b) each flow measurement method used under subsection (5) meets the accuracy requirements of subsection (6); and

(c) each flow measurement method used under subsection (7) meets the accuracy requirements of subsection (8).

(10) Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsection (4), (6) or (8), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(11) Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger's plant and shall maintain each flow measurement system according to good operating practices.

(12) Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 214/95, s. 33.

CALCULATION OF STREAM AND PLANT VOLUMES

34. (1) Each discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

(2) For the purposes of subsection (1), a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under section 33 for the day.

(3) Each discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) for the month.

(4) Each discharger shall calculate, in cubic metres, a monthly average volume for each process effluent monitoring stream at the discharger's plant for each month, by taking the arithmetic mean of the daily volumes determined under section 33 for the stream for the month.

(5) Each discharger shall calculate, in cubic metres, a daily merged effluent plant volume for each day.

(6) For the purposes of subsection (5), a merged effluent plant volume for a day is the sum of the daily merged effluent volumes determined under section 33 for the day.

(7) Each discharger shall calculate, in cubic metres, a monthly average merged effluent plant volume for each month, by taking the arithmetic mean of the daily merged effluent plant volumes calculated under subsection (5) for the month.

(8) Each discharger shall calculate, in cubic metres, a monthly average volume for each merged effluent monitoring stream at the discharger's plant for each month, by taking the arithmetic mean of the daily volumes determined under section 33 for the stream for the month.

(9) Each discharger shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.

(10) For the purposes of subsection (9), a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under section 33 for the day.

(11) Each discharger shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection (9) for the month.

(12) Each discharger shall calculate, in cubic metres, a monthly average volume for each cooling water effluent monitoring stream at the discharger's plant for each month, by taking the arithmetic mean of the daily volumes for the stream determined under section 33 for the month. O. Reg. 214/95, s. 34.

PART VII
STORM WATER CONTROL

Storm Water Control Study

35. (1) Each discharger shall complete a storm water control study in respect of the discharger's plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study" dated August, 1994.

(2) A discharger need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study" dated August, 1994; and

(b) the discharger notifies the Director in writing, by April 12, 1996, that the plant meets the exemption criteria referred to in clause (a).

(3) Subject to subsection (4), a discharger shall complete the storm water control study in respect of the discharger's plant by April 14, 1997.

(4) A discharger may postpone completion of the storm water control study in respect of the discharger's plant until April 12, 1999 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, by April 14, 1997, of the plans referred to in clause (a).

(5) Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger's plant on request during the plant's normal office hours. O. Reg. 214/95, s. 35.

PART VIII
RECORDS AND REPORTS

Record Keeping

36. (1) Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 19 to 22, 24, 31 and 32, all calculations performed under sections 12 to 15 and all determinations and calculations made or performed under sections 33 and 34.

(2) Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 7, including, for each sample, the date, the time of pick up, the sampling procedures used and any incidents likely to affect the analytical results.

(3) Each discharger shall keep records of the results of all monitoring performed under sections 23, 25, 26 and 30.

(4) Each discharger shall keep records of all maintenance and calibration procedures performed under section 33.

(5) Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction and including a description of any remedial action taken.

(6) Each discharger shall keep records of any incident in which effluent that would ordinarily flow past a sampling point established under this Regulation is discharged from the discharger's plant without flowing past that sampling point, stating the date, duration, cause and nature of each incident.

(7) Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger's plant.

(8) Each discharger shall keep records of the daily production, in tonnes, for the products listed in Column 2 of Schedule 9 for the discharger's plant.

(9) Each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(10) Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger's plant on request during the plant's normal office hours. O. Reg. 214/95, s. 36.

REPORTS AVAILABLE TO THE PUBLIC

37. (1) On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of plant loadings calculated under sections 12 to 14;

(b) a summary of concentrations determined under section 15;

(c) a summary of the results of monitoring performed under sections 19 to 22, 24 to 26 and 30 to 32;

(d) a summary of calculations performed under subsections 34 (1), (5) and (9);

(e) a summary of the loadings or other results that exceeded a limit under section 16 or 17; and

(f) a summary of the incidents in which effluent that would ordinarily flow past a sampling point established under this Regulation is discharged from the discharger's plant without flowing past that sampling point.

(2) Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger's plant on request during the plant's normal office hours.

(3) Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1).

(4) Each discharger shall ensure that each report prepared under section 30 is available to any person at the discharger's plant on request during the plant's normal office hours. O. Reg. 214/95, s. 37.

REPORTS TO THE DIRECTOR — GENERAL

38. (1) Each discharger shall notify the Director in writing of any change of name or ownership of the discharger's plant occurring after April 13, 1995, within 30 days after the end of the month in which the change occurs.

(2) Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger's plant, within 30 days of the change or redirection.

(3) A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week's duration.

(4) Each discharger shall notify the Director in writing if the discharger's plant has, for 90 consecutive days, operated at less than 75 per cent of the production rate specified in Column 3 of Schedule 9 for the discharger's plant, within 30 days of the end of the 90-day period. O. Reg. 214/95, s. 38.

REPORTS TO THE DIRECTOR — COMPLIANCE WITH SECTION 6 AND PART IV

39. (1) Each discharger shall report to the Director any incident in which effluent that would ordinarily flow past a sampling point established under this Regulation is discharged from the discharger's plant without flowing past that sampling point.

(2) Each discharger shall report to the Director any loading or other result that exceeds a limit prescribed by section 16 or 17.

(3) A report required under subsection (1) or (2) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 214/95, s. 39.

QUARTERLY REPORTS TO THE DIRECTOR

40. (1) No later than 45 days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger's plant throughout the quarter as required by subsections (3) to (8).

(2) A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format and signed by the discharger.

(3) A report under this section shall include all information included in a report given under section 39 during the quarter.

(4) Each discharger shall report, for each month in the quarter,

(a) the monthly average stream loadings for each stream and the highest and lowest daily stream loadings for each stream calculated under section 12 for each limited parameter;

(b) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 12 for each limited parameter;

(c) the monthly average stream loadings for each stream and the highest and lowest daily stream loadings for each stream calculated under section 13 for each merged parameter;

(d) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 13 for each merged parameter;

(e) the monthly average stream loadings for each stream and the highest and lowest daily stream loadings for each stream calculated under section 14 for each assessment parameter;

(f) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 14 for each assessment parameter.

(5) Each discharger shall report, for each month in the quarter,

(a) the monthly average stream volumes for each stream and the highest and lowest daily stream volumes for each stream calculated under sections 33 and 34;

(b) the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under section 34;

(c) the monthly average merged effluent plant volume and the highest and lowest daily merged effluent plant volumes calculated under section 34; and

(d) the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under section 34.

(6) Each discharger shall, for each sampling point established under this Regulation at the discharger's plant, report the number of days in each month in the quarter on which effluent flowed past the sampling point.

(7) Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 24 for each process effluent monitoring stream at the discharger's plant. O. Reg. 214/95, s. 40.

REPORTS TO THE DIRECTOR — CHRONIC TOXICITY TESTING

41. (1) Each discharger shall report to the Director the results of all monitoring performed under section 30, together with the date on which each sample was picked up, no later than 60 days after the end of each semi-annual period in which the monitoring was performed.

(2) A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 214/95, s. 41.

42. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 214/95, s. 42.

43. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 214/95, s. 43.

SCHEDULE 1
LIST OF REGULATED PLANTS

Plant Name	Location	Owner as of March 1, 1995
Algoma Steel	Sault Ste. Marie	Algoma Steel Inc.
Atlas Specialty Steels	Welland	Sammi Atlas Inc.
Dofasco	Hamilton	Dofasco Inc.
Ivaco Rolling Mills Limited Partnership	L'Orignal	Ivaco Inc. and Ivaco Rolling Mills Inc.
Lake Ontario Steel Company (LASCO)	Whitby	Co-Steel International Ltd.
Stelco Hilton Works	Hamilton	Stelco Inc.
Stelco Lake Erie Works	Nanticoke	Stelco Inc.

O. Reg. 214/95, Sched. 1.

SCHEDULE 2
PROCESS EFFLUENT: DESIGNATED SAMPLING POINTS, LIMITS, MONITORING FREQUENCY

PLANT: Algoma Steel (Sault Ste. Marie)
Designated Process Effluent Sampling Points: 0100, Bar & Strip Lagoon Effluent 0400, #1 Tube Mill Effluent 0700, Main Filter Plant Effluent 1800, #2 Tube Mill Effluent

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
2	Total Cyanide	W	35.4	16.4
4a	Ammonia plus Ammonium	W	608	219
8	Total Suspended Solids (TSS)	D	6,520	2,380
9	Total Lead	W	24.5	11.3
	Total Zinc	W	51.1	22.5
14	Phenolics (4AAP)	W	4.34	1.45
17	Benzene	W	0.417	0.143
19	Benzo(a)pyrene	W	0.481	0.166
	Naphthalene	W	1.12	0.389
25	Oil and Grease	W		

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Atlas Specialty Steels (Welland)
Designated Process Effluent Sampling Point:
0300, North Treatment Plant Effluent

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
8	Total Suspended Solids (TSS)	D	95.8	30.6
9	Total Nickel	D	4.99	1.58
	Total Zinc	D	3.68	0.751
	Total Chromium	D	0.801	0.227
25	Oil and Grease	W		

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Dofasco (Hamilton)
Designated Process Effluent Sampling Points:
0700, Coke Plant Effluent
0800, Blast Furnace Recycle Blowdown
0900, Steelmaking Effluent
1101, #1 Acid Regeneration Filter Discharge
2000, #2 Hot Mill Filter Plant Effluent

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
2	Total Cyanide	W	44.1	19.8
4a	Ammonia plus Ammonium	W	344	152
8	Total Suspended Solids (TSS)	D	1,760	646
9	Total Lead	W	21.2	6.08
	Total Zinc	W	36.1	11.7
14	Phenolics (4AAP)	W	1.08	0.364
17	Benzene	W	0.136	0.0452
19	Benzo(a)pyrene	W	0.136	0.0452
	Naphthalene	W	0.136	0.0452
25	Oil and Grease	W		

Explanatory Notes:
ATG Analytical Test Group

kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Ivaco Rolling Mills Limited Partnership (L'Orignal)				
Designated Process Effluent Sampling Point: 0900, Rod Mill Filter Effluent				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
8	Total Suspended Solids (TSS)	D	74.0	27.7
9	Total Lead	D	0.508	0.146
	Total Zinc	D	0.628	0.219
25	Oil and Grease	W		

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Lake Ontario Steel Company (LASCO) (Whitby)				
Designated Process Effluent Sampling Point: 0100, South Pond Effluent				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
8	Total Suspended Solids (TSS)	D	130	48.7
9	Total Lead	D	1.14	0.329
	Total Zinc	D	1.41	0.492
25	Oil and Grease	W		

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Stelco Hilton Works (Hamilton)				
Designated Process Effluent Sampling Points: 0601, East Side Filter Plant Effluent 2100, #3 Bloom & Billet				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
2	Total Cyanide	W	57.3	26.5
4a	Ammonia plus Ammonium	W	1,880	754
8	Total Suspended Solids (TSS)	D	27,300	7,500
9	Total Lead	W	27.7	13.9
	Total Zinc	W	168	61.1
	Total Chromium	W	42.9	12.6
14	Phenolics (4AAP)	W	5.80	2.05
17	Benzene	W	0.729	0.251
19	Benzo(a)pyrene	W	0.846	0.292
	Naphthalene	W	2.02	0.699
25	Oil and Grease	W		

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement

W Weekly monitoring requirement

PLANT: Stelco Hilton Works – #2 Rod Mill (Hamilton)				
Designated Process Effluent Sampling Point: 1100, #2 Rod Mill Effluent				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
8	Total Suspended Solids (TSS)	D	1,600	431
25	Oil and Grease	W		

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Stelco Lake Erie Works (Nanticoke)				
Designated Process Effluent Sampling Point: 0400, Blowdown Treatment Plant Effluent				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
2	Total Cyanide	W	26.0	10.3
4a	Ammonia plus Ammonium	W	21.8	9.88
8	Total Suspended Solids (TSS)	D	679	281
9	Total Lead	W	14.0	4.65
	Total Zinc	W	20.9	6.99
14	Phenolics (4AAP)	W	0.370	0.185
17	Benzene	W	0.0553	0.0184
19	Benzo(a)pyrene	W	0.0553	0.0184
	Naphthalene	W	0.0553	0.0184
25	Oil and Grease	W		

Explanatory Notes:
ATG Analytical Test Group
kg/day kilograms per day
D Daily monitoring requirement
W Weekly monitoring requirement

O. Reg. 214/95, Sched. 2.

SCHEDULE 3
ANALYTICAL REQUIREMENTS AT PLANTS WITH MORE THAN ONE PROCESS EFFLUENT SAMPLING POINT

PLANT: Algoma Steel (Sault Ste. Marie)					
ATG	Parameter	Sampling Points			
		0100	0400	0700	1800
	Column 1	Column 2	Column 3	Column 4	Column 5
2	Total Cyanide	-	-	X	-
4a	Ammonia plus Ammonium	-	-	X	-
8	Total Suspended Solids (TSS)	X	X	X	X
9	Total Lead	X	-	X	-
	Total Zinc	X	-	X	-
14	Phenolics (4AAP)	-	-	X	-
17	Benzene	-	-	X	-
19	Benzo(a)pyrene	-	-	X	-
	Naphthalene	-	-	X	-
25	Oil and Grease	X	X	X	X

Explanatory Notes:
ATG Analytical Test Group
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Dofasco (Hamilton)						
ATG	Parameter	Sampling Points				
		0700	0800	0900	1101	2000
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
2	Total Cyanide	X	X	-	-	-
4a	Ammonia plus Ammonium	X	X	-	-	-
8	Total Suspended Solids (TSS)	X	X	X	X	X
9	Total Lead	X	X	X	X	X
	Total Zinc	X	X	X	X	X
14	Phenolics (4AAP)	X	X	-	-	-
17	Benzene	X	-	-	-	-
19	Benzo(a)pyrene	X	-	-	-	-
	Naphthalene	X	-	-	-	-
25	Oil and Grease	X	-	-	X	X

Explanatory Notes:
ATG Analytical Test Group
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Stelco Hilton Works (Hamilton)			
ATG	Parameter	Sampling Points	
		2100	0601
	Column 1	Column 2	Column 3
2	Total Cyanide	-	X
4a	Ammonia plus Ammonium	-	X
8	Total Suspended Solids (TSS)	X	X
9	Total Lead	-	X
	Total Zinc	-	X
	Total Chromium	-	X
14	Phenolics (4AAP)	-	X
17	Benzene	-	X
19	Benzo(a)pyrene	-	X
	Naphthalene	-	X
25	Oil and Grease	X	X

Explanatory Notes:
ATG Analytical Test Group
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

O. Reg. 214/95, Sched. 3.

SCHEDULE 4
MERGED EFFLUENT: DESIGNATED SAMPLING POINTS, MONITORING FREQUENCY

PLANT: Atlas Specialty Steels (Welland)		
Designated Merged Effluent Sampling Point: 0100, 42 Inch Sewer		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
8	Total Suspended Solids (TSS)	W
9	Total Nickel	W
	Total Zinc	W
	Total Chromium	W
25	Oil and Grease	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement

PLANT: Dofasco (Hamilton)		
Designated Merged Effluent Sampling Point: 0400, West Bay Front Sewer		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
2	Total Cyanide	W

4a	Ammonia plus Ammonium	W
8	Total Suspended Solids (TSS)	W
9	Total Lead	W
	Total Zinc	W
14	Phenolics (4AAP)	W
17	Benzene	Q
19	Benzo(a)pyrene	Q
	Naphthalene	Q
25	Oil and Grease	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement
Q Quarterly monitoring requirement

PLANT: Stelco Hilton Works (Hamilton)		
Designated Merged Effluent Sampling Point: 0400, North Outfall		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
8	Total Suspended Solids (TSS)	W
25	Oil and Grease	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement

PLANT: Stelco Lake Erie Works (Nanticoke)		
Designated Merged Effluent Sampling Point: 0100, #4 Pond Discharge		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
2	Total Cyanide	W
4a	Ammonia plus Ammonium	W
8	Total Suspended Solids (TSS)	W
9	Total Lead	W
	Total Zinc	W
14	Phenolics (4AAP)	W
17	Benzene	Q
19	Benzo(a)pyrene	Q
	Naphthalene	Q
25	Oil and Grease	W

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement
Q Quarterly monitoring requirement

O. Reg. 214/95, Sched. 4.

SCHEDULE 5
COOLING WATER EFFLUENT: DESIGNATED SAMPLING POINTS, MONITORING FREQUENCY

PLANT: Algoma Steel (Sault Ste. Marie)

Designated Cooling Water Effluent Sampling Points:
0200, 60 Inch Sewer
0300, 30 Inch Sewer
0500, Cold Mill 24 Inch Sewer
0800, Boiler House
1000, #2 Steelmaking
1500, Cold Mill 20 Inch Sewer
1600, Coke Oven Condenser

ATG	Parameter	Monitoring Frequency	Sampling Points						
			0200	0300	0500	0800	1000	1500	1600
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
2	Total Cyanide	W	X	X	-	-	-	-	X
4a	Ammonia plus Ammonium	W	X	X	-	-	-	-	X

8	Total Suspended Solids (TSS)	W	X	X	X	X	X	X	X
9	Total Lead	W	X	X	X	-	X	X	-
	Total Zinc	W	X	X	X	-	X	X	-
14	Phenolics (4AAP)	W	X	X	-	-	-	-	X
17	Benzene	Q	-	-	-	-	-	-	X
19	Benzo(a)pyrene	Q	-	-	-	-	-	-	X
	Naphthalene	Q	-	-	-	-	-	-	X
25	Oil and Grease	W	X	X	X	X	X	X	X

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement
Q Quarterly monitoring requirement
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Dofasco (Hamilton)

Designated Cooling Water Effluent Sampling Points:
0100, East Boat Slip Sewer
0300, Boiler House Sewer #1
1200, Boiler House Sewer #2
1700, #2 Hot Mill/Melt Shop

ATG	Parameter	Monitoring Frequency	Sampling Points			
			0100	0300	1200	1700
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
8	Total Suspended Solids (TSS)	W	X	X	X	X
9	Total Lead	W	X	-	-	X
	Total Zinc	W	X	-	-	X
25	Oil and Grease	W	X	X	X	X

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Stelco Hilton Works (Hamilton)

Designated Cooling Water Effluent Sampling Points:
0100, West Side Open Cut
0200, Northwest Outfall
0602, #1 60 Inch Sewer

ATG	Parameter	Monitoring Frequency	Sampling Points		
			0100	0200	0602
	Column 1	Column 2	Column 3	Column 4	Column 5
2	Total Cyanide	W	X	X	-
4a	Ammonia plus Ammonium	W	X	X	-
8	Total Suspended Solids (TSS)	W	X	X	X
9	Total Zinc	W	X	X	-
14	Phenolics (4AAP)	W	X	X	-
17	Benzene	Q	X	X	-
19	Benzo(a)pyrene	Q	X	X	-
	Naphthalene	Q	X	X	-
25	Oil and Grease	W	X	X	X

Explanatory Notes:
ATG Analytical Test Group
W Weekly monitoring requirement
Q Quarterly monitoring requirement
X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

PLANT: Stelco Hilton Works – #2 Rod Mill (Hamilton)

Designated Cooling Water Effluent Sampling Point:
2200, #2 Rod Mill

ATG	Parameter	Monitoring Frequency	Sampling Point
			2200
	Column 1	Column 2	Column 3
8	Total Suspended Solids (TSS)	W	X
25	Oil and Grease	W	X

Explanatory Notes:

ATG Analytical Test Group

W Weekly monitoring requirement

X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

O. Reg. 214/95, Sched. 5.

SCHEDULE 6
ACUTE LETHALITY: SAMPLING POINTS

Plant Name	Sampling Point — Number and Description
Algoma Steel	0100, Bar and Strip Lagoon Outfall (Process Effluent)
	0200, 60 Inch Sewer (Cooling Water)
	0300, 30 Inch Sewer (Cooling Water)
	0400, #1 Tube Mill (Process Effluent)
	0500, Cold Mill 24 Inch Sewer (Cooling Water)
	0700, Main Filter Plant (Process Effluent)
	0800, Boiler House (Cooling Water)
	1000, #2 Steelmaking Cooling Water (Cooling Water)
	1500, Cold Mill 20 Inch Sewer (Cooling Water)
	1600, Coke Oven Condenser (Cooling Water)
	1800, #2 Tube Mill (Process Effluent)
Atlas Specialty Steels	0100, 42 Inch Sewer (Merged Effluent)
Dofasco	0100, East Boat Slip Sewer (Cooling Water)
	0300, Boiler House Sewer #1 (Cooling Water)
	0400, West Bay Front Sewer (Merged Effluent)
	1101, #1 Acid Regeneration Filter Discharge (Process Effluent)
	1200, Boiler House Sewer #2 (Cooling Water)
	1700, #2 Hot Mill/Melt Shop (Cooling Effluent)
	2000, #2 Hot Mill Filter Plant (Process Effluent)
Ivaco Rolling Mills Limited Partnership	0900, Rod Mill Filter Effluent (Process Effluent)
Lake Ontario Steel Company	0100, South Pond (Process Effluent)
Stelco Hilton Works	0100, West Side Open Cut (Cooling Water)
	0200, Northwest Outfall (Cooling Water)
	0400, North Outfall (Merged Effluent)
	0601, East Side Filter Plant (Process Effluent)
	0602, #1 60 Inch Sewer (Cooling Water)
	1100, #2 Rod Mill (Process Effluent)
	2200, #2 Rod Mill (Cooling Water)
Stelco Lake Erie Works	0100, #4 Pond Discharge (Merged Effluent)

O. Reg. 214/95, Sched. 6.

SCHEDULE 7
ACUTE LETHALITY TESTING: SAMPLING POINTS

Plant Name	Sampling Point — Number and Description
Atlas Specialty Steels	0300, North Treatment Plant Effluent (Process Effluent)
Dofasco	0700, Coke Plant Effluent (Process Effluent)
	0800, Blast Furnace Recycle Blowdown (Process Effluent)
	0900, Steelmaking Effluent (Process Effluent)
Stelco Hilton Works	2100, #3 Bloom & Billet (Process Effluent)
Stelco Lake Erie Works	0400, Blowdown Treatment Plant Effluent (Process Effluent)

O. Reg. 214/95, Sched. 7.

SCHEDULE 8
CHRONIC TOXICITY TESTING: SAMPLING POINTS

Plant Name	Sampling Point — Number and Description
Algoma Steel	0100, Bar and Strip Lagoon Outfall (Process Effluent)
	0400, #1 Tube Mill (Process Effluent)

	0700, Main Filter Plant (Process Effluent)
	1800, #2 Tube Mill (Process Effluent)
Atlas Specialty Steels	0100, 42 Inch Sewer (Merged Effluent)
Dofasco	0400, West Bay Front Sewer (Merged Effluent)
	1101, #1 Acid Regeneration Filter Discharge (Process Effluent)
	2000, #1 Hot Mill Filter Plant (Process Effluent)
Ivaco Rolling Mills Limited Partnership	0900, Rod Mill Filter Effluent (Process Effluent)
Lake Ontario Steel Company	0100, South Pond (Process Effluent)
Stelco Hilton Works	0400, North Outfall (Merged Effluent)
	0601, East Side Filter Plant (Process Effluent)
	1100, #2 Rod Mill (Process Effluent)
Stelco Lake Erie Works	0100, #4 Pond Discharge (Merged Effluent)

O. Reg. 214/95, Sched. 8.

SCHEDULE 9
PROCESS SUBCATEGORIES, PRODUCTS AND REFERENCE PRODUCTION RATE

PLANT NAME: Algoma Steel (Sault Ste. Marie)		
Process Subcategory	Product	Reference Production Rate (tonnes/day)
Column 1	Column 2	Column 3
Cokemaking Process	Metallurgical Coke	2,994
Ironmaking Process	Molten Iron	6,441
Steelmaking Process	Raw Steel	6,577
#1 Continuous Casting Process	Beams and Blooms	935
#2 Continuous Casting Process	Slabs	5,642
#1 & #2 Tube Mills	Seamless Tubes	907
Hotforming Process	Plate and Strip	11,431
Finishing Process	Pickled, Cold Rolled, Tempered Coils and Sheets	1,470

PLANT NAME: Atlas Specialty Steels (Welland)		
Process Subcategory	Product	Reference Production Rate (tonnes/day)
Column 1	Column 2	Column 3
Vacuum Oxygen Degassing Process	Refined Steel	680
Continuous Casting Process	Billet and Blooms	427
Hotforming Process	Stainless, Rock Drill Steels	427

PLANT NAME: Dofasco (Hamilton)		
Process Subcategory	Product	Reference Production Rate (tonnes/day)
Column 1	Column 2	Column 3
Cokemaking Process	Metallurgical Coke	4,264
Ironmaking Process	Molten Iron	9,435
Steelmaking Process	Raw Steel	9,042
Vacuum Degassing Process	Refined Steel	904
Continuous Casting Process	Slabs	9,042
Hotforming Process	Plates and Strip	12,410

PLANT NAME: Ivaco Rolling Mills Limited Partnership (L'Orignal)		
Process Subcategory	Product	Reference Production Rate (tonnes/day)
Column 1	Column 2	Column 3
Continuous Casting Process	Billets	1,701
Hotforming Process	Rods, Wire	2,500

PLANT NAME: Lake Ontario Steel Company (Whitby)		
Process Subcategory	Product	Reference Production Rate (tonnes/day)
Column 1	Column 2	Column 3
Continuous Casting Process	Billets	3,818
Hotforming Process	Structural Steel	3,818

PLANT NAME: Stelco Hilton Works (Hamilton)		
Process Subcategory	Product	Reference Production Rate (tonnes/day)
Column 1	Column 2	Column 3
Cokemaking Process	Metallurgical Coke	4,500
Ironmaking Process	Molten Iron	8,600
Sintering Process	Sinter	1,800
Steelmaking Process	Raw Steel	9,200
Continuous Casting Process	Slabs	9,200
#3 Bloom & Billet	Bloom and Billet	3,700
Hotforming Process	Plates and Strip	10,163
Finishing Process	Pickled, Cold Rolled, Hot Coated, Tempered Coils and Sheets	6,900

PLANT NAME: Stelco Hilton Works – #2 Rod Mill (Hamilton)		
Process Subcategory	Product	Reference Production Rate (tonnes/day)
Column 1	Column 2	Column 3
Hotforming Process	Rods	2,721

PLANT NAME: Stelco Lake Erie Works (Nanticoke)		
Process Subcategory	Product	Reference Production Rate (tonnes/day)
Column 1	Column 2	Column 3
Cokemaking Process	Metallurgical Coke	1,734
Ironmaking Process	Molten Iron	5,960
Steelmaking Process	Raw Steel	6,800
Vacuum Degassing	Refined Steel	6,800
Continuous Casting Process	Slabs	6,800
Hotforming Process	Plates and Strip	7,500

O. Reg. 214/95, Sched. 9.

Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 215/95

Amended to O. Reg. 174/99

EFFLUENT MONITORING AND EFFLUENT LIMITS — ELECTRIC POWER GENERATION SECTOR

Notice of Currency:* This document is up to date.

*This notice is usually current to within two business days of accessing this document. For more current amendment information, see the Table of Regulations (Legislative History).

This Regulation is made in English only.

PART I
GENERAL

INTERPRETATION

1. (1) In this Regulation,

"building effluent" means effluent that has been collected within a building from equipment drains, floor drains or trenches, whether or not it is combined with cooling water;

"building effluent monitoring stream" means a building effluent stream on which a sampling point is established under section 7;

"building effluent sampling point" means a sampling point established on a building effluent stream under section 7;

"building parameter" means a parameter that is listed in subsection 27 (1);

"Director", in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger's plant is located and includes an alternate named by the Director;

"discharger" means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

"event process effluent monitoring stream" means an event process effluent stream on which a sampling point is established under section 7;

"event process effluent sampling point" means a sampling point established on an event process effluent stream under section 7;

"limited parameter",

(a) in relation to a plant named in Schedule 2, means a parameter for which a limit is specified in Column 4 or 5 of Schedule 2 for the plant, and

(b) in relation to a plant named in Schedule 3, means a parameter for which a limit is specified in Column 4 or 5 of Schedule 3 for the plant;

"non-event process effluent monitoring stream" means a non-event process effluent stream on which a sampling point is established under section 7;

"non-event process effluent sampling point" means a sampling point established on a non-event process effluent stream under section 7;

"pick up", in relation to a sample, means pick up for the purpose of storage, including storage within an automatic sampling device, and transportation to and analysis at a laboratory;

"plant" means an industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;

"process change" means a change in equipment, production processes, process materials or treatment processes;

"quarter" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"semi-annual period" means all or part of a period of six months beginning on the first day of January or July;

"storm water effluent" means run-off from a storm event or thaw that is not used in any industrial process.

(2) The following are types of non-event process effluent streams:

1. A stream of effluent that is discharged from a water treatment plant at a plant, whether or not it is combined with cooling water or storm water effluent.
2. A stream of effluent that is discharged from an industrial sewage treatment plant at a plant, whether or not it is combined with cooling water or storm water effluent.
3. A stream of ash transport water that has received treatment, whether or not it is combined with cooling water or storm water effluent.
4. A stream of ash quench water, whether or not it is combined with cooling water or storm water effluent.
5. A stream of boiler seal water, whether or not it is combined with cooling water or storm water effluent.
6. A stream of effluent that is discharged from an oily water separator on a continuous basis at a plant, whether or not it is combined with cooling water or storm water effluent.
7. A stream of effluent that is discharged from an enriching unit stripper, whether or not it is combined with cooling water or storm water effluent.
8. A stream of ash transport water that has not received treatment, whether or not it is combined with cooling water or storm water effluent.

(3) The following are types of event process effluent streams:

1. A stream of effluent that is discharged from a coal storage site at a plant, whether or not it is combined with cooling water or storm water effluent.
2. A stream of effluent that is discharged from a radioactive liquid waste management system tank at a plant, whether or not it is combined with cooling water or storm water effluent.
3. A stream of effluent that results from any cleaning or maintenance operations at a plant, whether or not it is combined with cooling water or storm water effluent.
4. A stream of effluent that is discharged from an oily water separator on other than a continuous basis at a plant, whether or not it is combined with cooling water or storm water effluent.
5. A stream of effluent that is discharged from an enriching unit stripper effluent holding lagoon.

(4) Despite paragraph 6 of subsection (2) and paragraph 4 of subsection (3), a stream of effluent that is discharged from an oily water separator and consists only of storm water effluent is not a type of non-event process effluent or event process effluent stream.

(5) For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(6) An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger's behalf. O. Reg. 215/95, s. 1.

PURPOSE

2. The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants listed in Schedule 1. O. Reg. 215/95, s. 2.

APPLICATION

3. (1) This Regulation applies to every plant that is listed in Schedule 1, except for,

(a) J.C. Keith Thermal Generating Station; and

(b) R.L. Hearn Thermal Generating Station.

(2) This Regulation applies to a plant named in clause (1) (a) or (b) beginning on the first day on which a non-event process effluent stream flows at the plant.

(3) This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer. O. Reg. 215/95, s. 3.

OBLIGATIONS UNDER APPROVALS, ORDERS, ETC.

4. For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 215/95, s. 4.

BY-PASSES

5. Beginning on April 13, 1998, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger's plant without flowing past that sampling point,

regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 215/95, s. 5.

Sampling and Analytical Procedures

6. (1) Each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.

(2) Each discharger shall maintain the sampling equipment used at the discharger's plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of each limited parameter and building parameter from the plant. O. Reg. 215/95, s. 6.

PART II
SAMPLING POINTS

Establishment and Elimination of Sampling Points

7. (1) Each discharger shall, by July 12, 1995, establish a sampling point on each non-event process effluent stream and event process effluent stream at the discharger's plant, as necessary so that the concentrations determined under sections 11 and 12 and the plant loadings calculated under sections 13 and 14 for each limited parameter accurately reflect the level of discharge of each such parameter from the plant.

(2) If circumstances change so that a new sampling point is necessary at a discharger's plant in order to permit the calculation of concentrations under sections 11 and 12 and the calculation of loadings under sections 13 and 14 for each limited parameter that accurately reflect the level of discharge of each such parameter from the plant, the discharger shall, within 30 days of the change, establish the new sampling point.

(3) A discharger may eliminate a sampling point established under subsection (1) or (2) if the sampling point is no longer necessary to permit the calculation of concentrations under sections 11 and 12 and the calculation of loadings under sections 13 and 14 for each limited parameter that accurately reflect the level of discharge of each such parameter from the plant.

(4) For the purposes of this section, except for subsection (6), a concentration for a parameter or a loading for a parameter that is based on analytical results that are significantly affected by dilution or masking due to the merging of streams upstream of a sampling point at a plant is not a concentration or a loading that accurately reflects the level of discharge of the parameter from the plant.

(5) In determining what is necessary to meet a discharger's obligations to establish sampling points under this section, except for subsection (6), the discharger shall consider both which streams should have sampling points and where on a stream a sampling point should be located.

(6) Each discharger shall, by July 12, 1995, establish a sampling point on each building effluent stream at the discharger's plant, as necessary so that no building effluent is discharged from the plant to surface water without flowing past a sampling point. O. Reg. 215/95, s. 7.

Reports on Sampling Points

8. (1) By July 24, 1995, each discharger shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger's plant as of July 12, 1995.

(2) Within 30 days after establishing a sampling point under this Regulation that is not shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing the location of the sampling point, together with a revised list and plot plan showing the sampling point.

(3) Within 30 days after eliminating a sampling point under this Regulation that is shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point. O. Reg. 215/95, s. 8.

Use of Sampling Points Established under this Part

9. Except as permitted under sections 21, 23, 24 and 26, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 215/95, s. 9.

PART III
CALCULATION OF CONCENTRATIONS AND LOADINGS

Calculations under this Part — General

10. (1) For the purposes of performing a calculation under sections 11 to 15, a discharger shall use the actual analytical result obtained by the laboratory.

(2) Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of

Industrial/Municipal Wastewater" dated August, 1994, the discharger shall use the value zero for the purpose of performing a calculation under sections 11 to 15.

(3) Each discharger shall ensure that each calculation of a concentration required by section 11 or 12 is performed as soon as reasonably possible after the analytical results on which the calculation is based become available to the discharger.

(4) Each discharger shall ensure that each calculation of a loading required by section 13, 14 or 15 is performed in time to comply with subsection 35 (4). O. Reg. 215/95, s. 10.

Calculation of Concentrations — Non-event Process Effluent

11. (1) Each discharger shall calculate, in milligrams per litre, a monthly average concentration for each limited parameter in each non-event process effluent monitoring stream of the discharger for each month.

(2) For the purposes of subsection (1), a monthly average concentration for a parameter for a month is the arithmetic mean of the analytical results obtained for the parameter from the samples collected under section 19 or 20, as the case may be, from the stream for the month. O. Reg. 215/95, s. 11.

Calculation of Concentrations — Event Process Effluent

12. (1) Each discharger for a plant at which there is an event process effluent monitoring stream of a type described in paragraph 2 of subsection 1 (3) shall calculate, in milligrams per litre, a monthly average concentration for each limited parameter in the stream of that type at the discharger's plant for each month.

(2) The discharger for the Lambton Thermal Generating Station shall calculate, in milligrams per litre, a monthly average concentration for each limited parameter in each stream at the plant of a type described in paragraph 1 of subsection 1 (3) for each month.

(3) For the purposes of subsections (1) and (2), a monthly average concentration for a parameter for a month is the arithmetic mean of the analytical results obtained for the parameter from the samples collected under section 21 from the stream or from a tank that discharges into the stream for the month. O. Reg. 215/95, s. 12.

Calculation of Loadings — Non-event Process Effluent

13. (1) Each discharger shall calculate, in kilograms, a daily non-event process effluent stream loading for each limited parameter in each non-event process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 28, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily non-event process effluent plant loading for each limited parameter for each day for which the discharger is required to calculate a daily non-event process effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily non-event process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily non-event process effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily non-event process effluent stream loading for a parameter for a day under subsection (1), the daily non-event process effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily non-event process effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average non-event process effluent plant loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a non-event process effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average non-event process effluent plant loading for a parameter for a month is the arithmetic mean of the daily non-event process effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 215/95, s. 13.

Calculation of Loadings — Event Process Effluent

14. (1) Each discharger shall calculate, in kilograms, a 24-hour event process effluent stream loading for each limited parameter in each event process effluent monitoring stream of the discharger for each 24-hour period ending at noon in which a sample is collected under this Regulation from the stream or from a tank that discharges into the stream for analysis for the parameter.

(2) When calculating an event process effluent stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the 24-hour volume of effluent, as determined under section 28, for the stream for the 24-hour period.

(3) Each discharger shall calculate, in kilograms, a 24-hour event process effluent plant loading for each limited parameter for each 24-hour period ending at noon for which the discharger is required to calculate a 24-hour event process effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a 24-hour event process effluent plant loading for a parameter for a 24-hour period ending at noon is the sum, in kilograms, of the 24-hour event process effluent stream loadings for the parameter calculated under subsection (1) for the period.

(5) Where a discharger calculates only one 24-hour event process effluent stream loading for a parameter for a 24-hour period ending at noon under subsection (1), the 24-hour event process effluent plant loading for the parameter for the period, for the purposes of subsection (3), is the single 24-hour event process effluent stream loading for the parameter for the period.

(6) Each discharger shall calculate, in kilograms, a monthly average event process effluent stream loading for each limited parameter for each event process effluent monitoring stream of the type described in paragraph 2 of subsection 1 (3) at the discharger's plant for each month in which a sample is collected under this Regulation more than once from the stream or from a tank that discharges into the stream for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average event process effluent stream loading for a parameter for a stream for a month is the arithmetic mean of the 24-hour event process effluent stream loadings for the parameter calculated under subsection (1) for the stream for the month. O. Reg. 215/95, s. 14.

CALCULATION OF LOADINGS — BUILDING EFFLUENT

15. (1) Each discharger shall calculate, in kilograms, a daily building effluent stream loading for each building parameter in each building effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 28, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a quarterly building effluent plant loading for each building parameter for each quarter in which the discharger is required to calculate a daily building effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a quarterly effluent plant loading for a parameter for a quarter is the sum of the daily building effluent stream loadings for the parameter calculated under subsection (1) for the quarter. O. Reg. 215/95, s. 15.

PART IV
PARAMETER AND LETHALITY LIMITS

PARAMETER LIMITS

16. (1) Each discharger shall ensure that each analytical result obtained for each limited parameter from each sample collected from each non-event process effluent monitoring stream at the discharger's plant does not exceed the daily concentration limit specified for the parameter in Column 4 of Schedule 2.

(2) Each discharger shall ensure that each monthly average concentration calculated for a limited parameter under subsection 11 (1) in connection with each non-event process effluent monitoring stream at the discharger's plant does not exceed the monthly average concentration limit specified for the parameter in Column 5 of Schedule 2.

(3) Despite subsections (1) and (2), where the non-event process effluent stream is of the type described in paragraph 1 of subsection 1 (2) and aluminum-based water treatment chemicals are not used to treat effluent in the water treatment plant that discharges into the stream, the discharger need not ensure,

(a) that the analytical result obtained for the parameter aluminium does not exceed the daily concentration limit specified for the parameter in Column 4 of Schedule 2; or

(b) that the monthly average concentration calculated for the parameter aluminum does not exceed the monthly average concentration limit specified for the parameter in Column 5 of Schedule 2.

(4) Each discharger shall ensure that each analytical result obtained for each limited parameter from each sample collected from each event process effluent monitoring stream at the discharger's plant does not exceed the daily concentration limit specified for the parameter in Column 4 of Schedule 3.

(5) Each discharger shall ensure that each monthly average concentration calculated for a limited parameter under section 12 in connection with each event process effluent monitoring stream at the discharger's plant does not exceed the monthly average concentration limit specified for the parameter in Column 5 of Schedule 3.

(6) Each discharger shall control the quality of each non-event process effluent monitoring stream and each event process effluent monitoring stream at the discharger's plant to ensure that the pH value of any sample collected at a non-event process effluent sampling point or event process effluent sampling point at the plant is within the range of 6.0 to 9.5. O. Reg. 215/95, s. 16.

LETHALITY LIMITS

17. (1) Each discharger shall control the quality of each non-event process effluent monitoring stream, each event process effluent monitoring stream and each building effluent monitoring stream at the discharger's plant to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a non-event process effluent sampling point, event effluent sampling point or building effluent sampling point at the plant results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 215/95, s. 17.

(2) Subsection (1) does not apply to a rainbow trout acute lethality test or *Daphnia magna* acute lethality test performed on a grab sample collected at a sampling point if,

(a) the sampling point is located on an effluent stream affected by chlorination that is authorized by a certificate of approval and that is used for the prevention or reduction of biofouling;

(b) the acute lethality test results in mortality for more than 50 per cent of the test organisms in 100 per cent effluent and laboratory analysis indicates that this result is caused solely by the presence of chlorine; and

(c) a rainbow trout acute lethality test and a *Daphnia magna* acute lethality test performed on a grab sample collected at a place that is located downstream of the sampling point and before the effluent from the effluent stream is discharged from the plant both result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent.

(3) If, pursuant to subsection (2), subsection (1) does not apply to an acute lethality test performed on a grab sample collected at a sampling point, the place referred to in clause (2) (c) shall be deemed, for the purposes of subsection (1) and section 26, to be a sampling point established under section 7.

(4) If, pursuant to subsection (2), subsection (1) does not apply to an acute lethality test performed on a grab sample collected at a sampling point,

(a) the discharger shall take steps to ensure that future rainbow trout acute lethality tests and *Daphnia magna* acute lethality tests performed on grab samples collected at the sampling point will result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent; and

(b) before July 1 in each year following the calendar year in which subsection (1) did not apply, the discharger shall submit to the Director a report on what has been done and what will be done to comply with clause (a).

(5) A report under clause (4) (b) shall include a timetable, including milestone dates and a completion date, for ensuring that future rainbow trout acute lethality tests and *Daphnia magna* acute lethality tests performed on grab samples collected at the sampling point will result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent.

(6) Subsections (2) to (5) do not apply after July 1, 2002. O. Reg. 174/99, s.1.

PART V
MONITORING

MONITORING — GENERAL

18. (1) Despite sections 19 to 27, a discharger need not collect samples from any stream at the discharger's plant on a day on which there is no discharge from any non-event process effluent stream, event process effluent stream or building effluent stream at the plant.

(2) Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters, the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(3) A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(4) Subject to subsection (5), each discharger shall pick up all sets of samples required to be picked up at the discharger's plant under sections 19, 20, 23 and 27 between the hours of 9 a.m. and 12 noon.

(5) If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger's plant are such that it would be impractical to pick up a set of samples from each sampling point established at the plant under this Regulation within the time period specified in subsection (4), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (4).

(6) Subject to subsections (7) and (8), where a discharger is required by section 19, 20, 23 or 27 to pick up a set of samples, the discharger shall pick up a set collected over the 24-hour period immediately preceding the pick up.

(7) The 24-hour period referred to in subsection (6) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (4) or of a different three-hour period specified in a notice under subsection (5).

(8) Where a notice has been given under subsection (5) in respect of a plant specifying a time period longer than three hours, the 24-hour period referred to in subsection (6) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(9) If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (5) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (5) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 215/95, s. 18.

MONITORING — NON-EVENT PROCESS EFFLUENT — DAILY

19. (1) Subject to subsections (2) to (4), each discharger shall, on each day, pick up a set of samples collected from each non-event process effluent monitoring stream at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 2 for the discharger's plant for the type of non-event process effluent stream, is daily.

(2) Subsections (3) and (4) apply only to the Lakeview Thermal Generating Station, Lambton Thermal Generating Station and Nanticoke Thermal Generating Station.

(3) Subsection (1) does not apply to non-event process effluent streams of the types described in paragraphs 4 and 5 of subsection 1 (2) until April 13, 1998.

(4) Beginning on April 14, 1997, each discharger shall, on each day, pick up a set of samples collected from one stream at the discharger's plant of a type described in paragraph 4 or 5 of subsection 1 (2) and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 2 of the discharger's plant for the type of non-event process effluent stream, is daily.

(5) A discharger need not meet the requirements of subsections (1) and (4) where it is impossible to do so because of sampling by a provincial officer. O. Reg. 215/95, s. 19.

MONITORING — NON-EVENT PROCESS EFFLUENT — WEEKLY

20. (1) Subject to subsections (2) to (5), each discharger shall, on one day in each week, pick up a set of samples collected from each non-event process effluent monitoring stream at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 2 for the discharger's plant for the type of non-event process effluent stream, is weekly.

(2) Despite subsection (1), a discharger need not analyze a sample collected from a stream to which subsection 16 (3) applies for a parameter listed in subsection 16 (3).

(3) Subsections (4) and (5) apply only to the Lakeview Thermal Generating Station, Lambton Thermal Generating Station and Nanticoke Thermal Generating Station.

(4) Subsection (1) does not apply to non-event process effluent streams of the types described in paragraphs 4 and 5 of subsection 1 (2) until April 13, 1998.

(5) Beginning on April 14, 1997, each discharger shall, on one day in each week, pick up a set of samples collected from one stream at the discharger's plant of a type described in paragraph 4 or 5 of subsection 1 (2) and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 2 of the discharger's plant for the type of non-event process effluent stream, is weekly.

(6) There shall be an interval of at least four days between successive pick up days at the plant under subsection (1).

(7) All samples picked up under subsections (1) and (5) in a week shall be picked up on the same day in the week. O. Reg. 215/95, s. 20.

MONITORING — EVENT PROCESS EFFLUENT — DAILY AND WEEKLY

21. (1) Each discharger shall, in each 24-hour period ending at noon, pick up a set of samples collected from each event process effluent monitoring stream at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 3 for the discharger's plant for the type of event process effluent stream, is daily.

(2) A set of samples collected at a sampling point under subsection (1) in a 24-hour period ending at noon shall be collected,

(a) throughout the entire 24-hour period, where effluent flows past the sampling point throughout the entire 24-hour period; and

(b) throughout any portions of the 24-hour period during which effluent flows past the sampling point, where effluent does not flow past the sampling point throughout the entire 24-hour period.

(3) Each discharger shall pick up each set of samples collected under subsection (1) during a 24-hour period by the end of that period.

(4) A discharger need not meet the requirements of subsections (1) to (3) where it is impossible to do so because of sampling by a provincial officer.

(5) Subsections (1) to (3) do not apply in relation to,

(a) a sampling point on an event process effluent monitoring stream of a type described in paragraph 1 of subsection 1 (3) at the Lambton Thermal Generating Station; or

(b) a sampling point on an event process effluent monitoring stream of a type described in paragraph 2 of subsection 1 (3).

(6) Each discharger shall, during each discharge at the discharger's plant of effluent from a radioactive liquid waste management system tank at the discharger's plant into a stream referred to in clause (5) (b), collect a grab sample from the sampling point on the stream.

(7) Instead of collecting a grab sample from a sampling point during a discharge as required by subsection (6), a discharger may collect a grab sample from the tank immediately before the discharge.

(8) A discharger shall combine all grab samples collected during each 24-hour period ending at noon at the discharger's plant under subsections (6) and (7), in proportion to the volumes of the discharges in respect of which the grab samples were collected, and shall immediately pick up the combined sample.

(9) For the purposes of subsections (11), (12), (14) and (19), where only one grab sample is collected at a discharger's plant under subsections (6) and (7) during a 24-hour period ending at noon, the single grab sample shall be deemed to be a combined sample prepared under subsection (8).

(10) A discharger shall pick up a single grab sample to which subsection (9) applies by noon of the 24-hour period.

(11) Each discharger shall analyze each combined sample prepared under subsection (8) for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 3 for the type of event process effluent stream described in paragraph 2 of subsection 1 (3), is daily.

(12) Once in each week, each discharger shall analyze one combined sample prepared under subsection (8) for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 3 for the type of event process effluent stream described in paragraph 2 of subsection 1 (3), is weekly.

(13) Subsection (12) does not apply to require analysis for the parameter oil and grease.

(14) There shall be an interval of at least four full periods of 24 hours ending at noon between pick up times at the plant of the combined samples used for successive weekly analyses under subsection (12).

(15) Once in each week, throughout one 24-hour period ending at noon, each discharger shall collect a duplicate sample for each grab sample collected under subsections (6) and (7), shall combine the duplicate grab samples in equal volumes and shall immediately pick up the combined sample.

(16) For the purposes of subsection (15), a discharger shall not choose a 24-hour period during which only one grab sample is collected under subsections (6) and (7) at the discharger's plant.

(17) Each discharger shall analyze each combined sample prepared under subsection (15) for the parameter oil and grease.

(18) There shall be an interval of at least four full periods of 24 hours ending at noon between pick up times at the plant of the combined samples used for successive analyses under subsection (17).

(19) All combined samples picked up under subsection (15) in a week and all combined samples picked up in the week to meet the analysis requirements of subsection (12) shall be picked up on the same day in the week.

(20) Each discharger for the Lambton Thermal Generating Station shall, on one day in each week, pick up a grab sample collected from the event process effluent monitoring stream of the type described in paragraph 1 of subsection 1 (3) at the plant and shall analyze each grab sample for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 3 for the discharger's plant for the type of event process effluent stream described in paragraph 1 of subsection 1 (3), is weekly. O. Reg. 215/95, s. 21.

MONITORING — NON-EVENT PROCESS EFFLUENT — QUALITY CONTROL

22. (1) On one day in each year after 1995, on a day on which samples are picked up at the plant under subsection 20 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 20 (1) at one non-event process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 2 for the discharger's plant for the type of non-event process effluent stream, is daily.

(2) On one day in each year after 1995, on the day on which samples are picked up at the plant under subsection (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 20 (1) at one non-event process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 3 of Schedule 2 for the discharger's plant for the type of non-event process effluent stream, is weekly.

(3) In each year, a discharger shall use the same non-event process effluent sampling point for the purposes of subsections (1) and (2).

(4) Each discharger shall prepare a travelling blank and travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) and shall analyze the travelling blank and travelling spiked

blank samples in accordance with the directions set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.

(5) There shall be an interval of at least six months between successive pick up days at the plant under subsection (1). O. Reg. 215/95, s. 22.

MONITORING — NON-EVENT AND EVENT PROCESS EFFLUENT — pH MEASUREMENT

23. (1) Each discharger shall, on each day during the time period applicable to the plant under subsection 18 (4) or (5), collect a grab sample from each non-event process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(2) Each discharger shall, within each 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) on each day, collect two more grab samples from each non-event process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(3) There shall be an interval of at least four hours between each of the three collections at a stream under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Each grab sample picked up under subsection (4) shall be analyzed within 24 hours of when it was picked up.

(6) Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each day during the time period applicable to the plant under subsection 18 (4) or (5), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection in each day.

(7) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (6) in each 24-hour period.

(8) Each discharger shall, in each 24-hour period ending at noon, collect a grab sample from each event process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(9) For the purposes of subsection (8), in relation to a stream of the type described in paragraph 2 of subsection 1 (3), a discharger may collect a grab sample from a radioactive liquid waste management system tank immediately before a discharge into the stream instead of collecting a grab sample from the sampling point on the stream. O. Reg. 215/95, s. 23.

(10) A discharger for the Lambton Thermal Generating Station need not comply with subsection (8).

(11) Each discharger for the Lambton Thermal Generating Station may, on one day in each week, on a day on which samples are picked up at the plant under subsection 21 (20), collect a grab sample from each event process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH. O. Reg. 525/95, s. 1.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

24. (1) Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" dated July, 1990.

(2) Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) On one day in each month, on a day on which samples are picked up at the plant under subsection 20 (1), each discharger shall collect and immediately pick up a grab sample at each non-event process effluent sampling point at the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(4) There shall be an interval of at least 15 days between successive pick up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(6) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(7) Samples picked up at a plant under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(8) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection 20 (1).

(9) There shall be an interval of at least 45 days between successive pick up days at the plant under subsection (6).

(10) All samples picked up under subsection (6) in a quarter shall be picked up on the same day in the quarter.

(11) If a rainbow trout acute lethality test performed under subsection (6) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (6) to (10) cease to apply in respect to samples from that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further 12 consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

(12) A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger's plant, within 30 days after the day on which the change begins. O. Reg. 215/95, s. 24 (1-12).

(13), (14) REVOKED: O. Reg. 215/95, s. 24 (15).

(15) SPENT: O. Reg. 215/95, s. 24 (15).

(16) Subsections (2) to (15) apply with necessary modifications to each event process effluent sampling point, other than a sampling point on an event process effluent stream of the type described in paragraph 2 of subsection 1 (3), and, for the purpose,

(a) the reference in subsection (3) to each non-event process effluent sampling point shall be deemed to be a reference to each event process effluent sampling point, other than a sampling point on an event process effluent stream of the type described in paragraph 2 of subsection 1 (3); and

(b) the reference in subsections (3) and (8) to subsection 20 (1) shall be deemed to be a reference to subsection 21 (1).

(17) Subsections (2) to (15) apply with necessary modifications to the sampling point on the event process effluent stream of the type described in paragraph 2 of subsection 1 (3) and, for the purpose,

(a) the reference in subsection (3) to each non-event process effluent sampling point shall be deemed to be a reference to the sampling point on the event process effluent stream of the type described in paragraph 2 of subsection 1 (3); and

(b) the reference in subsection (3) to subsection 20 (1) shall be deemed to be a reference to subsection 21 (6).

(18) Instead of collecting a grab sample from the sampling point on the stream as required by subsection (17), a discharger may collect a grab sample from a radioactive liquid waste management system tank at the plant immediately before a discharge into the stream.

(19) For the purposes of this section, a discharger at the Bruce Heavy Water Plant may, instead of using a sampling point on a non-event process effluent monitoring stream of the type described in paragraph 7 of subsection 1 (2) or on an event process effluent monitoring stream of the type described in paragraph 5 of subsection 1 (3), use an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water.

(20) On one day in each quarter, each discharger shall collect and immediately pick up a grab sample at each building effluent sampling point at the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(21) Each sample collected under subsection (20) from a sampling point shall be collected on a day on which a sample is collected from that sampling point under subsection 27 (1).

(22) Subsections (2), (13), (14) and (15) apply with necessary modifications to monitoring under subsection (20) and, for the purpose, the reference in subsections (13) and (14) to subsection (3) shall be deemed to be a reference to subsection (20). O. Reg. 215/95, s. 24 (16-22).

MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

25. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*" dated July, 1990.

(2) Subsections 24 (2) to (22) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna*.

(3) Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger's plant under this section on a day on which the discharger collects a sample from the sampling point under section 24, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 24. O. Reg. 215/95, s. 25.

MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

26. (1) Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows" dated February, 1992.

(2) Where a discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*" dated February, 1992.

(3) On one day in each semi-annual period, on a day on which samples are picked up at the plant under subsection 20 (1), each discharger shall collect and immediately pick up a grab sample from each non-event process effluent sampling point at the discharger's plant and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

(4) On one day in each semi-annual period, on a day on which samples are picked up at the plant for analysis under subsection 21 (12), each discharger shall,

(a) collect and immediately pick up a grab sample from the event process effluent stream of the type described in paragraph 2 of subsection 1 (3) at the discharger's plant; and

(b) perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on the sample.

(5) Instead of collecting a grab sample from the sampling point on the stream as required by subsection (4), a discharger may collect a grab sample from a radioactive liquid waste management system tank at the plant immediately before a discharge into the stream.

(6) There shall be an interval of at least 90 days between successive pick up days at the plant under subsections (3) and (4).

(7) All samples picked up under subsections (3) and (4) in a semi-annual period shall be picked up on the same day in the semi-annual period.

(8) A discharger need not collect a sample from a sampling point in accordance with subsections (3) and (4) until 12 consecutive monthly rainbow trout acute lethality tests and 12 consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at a discharger's plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 215/95, s. 26.

MONITORING — BUILDING EFFLUENT — QUARTERLY

27. (1) Each discharger shall, on one day in each quarter, pick up a grab sample at each building effluent sampling point at the discharger's plant and shall analyze each sample for the following parameters:

1. Total Suspended Solids (TSS), referred to as Analytical Test Group 8 in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.
2. Oil and grease, referred to as Analytical Test Group 25 in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.

(2) There shall be an interval of at least 45 days between successive pick up days at the plant under subsection (1). O. Reg. 215/95, s. 27.

PART VI
EFFLUENT VOLUME

FLOW MEASUREMENT

28. (1) For the purposes of this section, a volume of effluent for a non-event process effluent stream for a day is the volume that flowed past the sampling point established under Part II on the stream during the 24-hour period preceding the pick up of the first sample picked up from the stream for the day.

(2) For the purposes of this section, a volume of effluent for a building effluent stream for a day is the volume that flowed past the sampling point established under Part II on the stream during a 24-hour period beginning at any time between 9 a.m. and noon on that day.

(3) For the purposes of this section, a 24-hour volume of effluent for an event process effluent stream for a 24-hour period ending at noon is the volume that flowed past the sampling point established under Part II on the stream during the 24-hour period.

(4) Each discharger shall determine in cubic metres a daily volume of effluent for each non-event process effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(5) Despite subsection (4), where a non-event process effluent stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of individual batch volume measurements.

(6) Each discharger shall use flow measurement methods that allow the daily volumes for non-event process effluent streams to be determined to an accuracy of within plus or minus 15 per cent.

(7) Each discharger shall determine in cubic metres a 24-hour volume of effluent for each event process effluent stream at the discharger's plant for each 24-hour period ending at noon in which a sample is collected under this Regulation from the stream or from a tank that discharges into the stream.

(8) For the purposes of subsection (7), a discharger need not use continuous flowrate measurements.

(9) Each discharger shall use flow measurement methods that allow the daily volumes for event process effluent streams to be determined to an accuracy of within plus or minus 15 per cent.

(10) Each discharger shall determine in cubic metres a daily volume of effluent for each building effluent monitoring stream at the discharger's plant for each day.

(11) Subject to subsection (12), each discharger shall use flow measurement methods that allow the daily volumes for building effluent streams determined under subsection (10) to be determined to an accuracy of within plus or minus 20 per cent.

(12) For the purposes of subsection (10), in relation to a building effluent stream that originates in the power house at the plant, a discharger for the Lakeview Thermal Generating Station, Lambton Thermal Generating Station, Lennox Thermal Generating Station or Nanticoke Thermal Generating Station may determine the daily volume for the stream for a day as the volume of low pressure service water that served the boiler unit for the stream during a 24-hour period beginning at any time between 9 a.m. and noon on that day.

(13) Each discharger shall use methods that allow the daily volumes of low pressure service water determined under subsection (12) to be determined to an accuracy of within plus or minus 20 per cent.

(14) Each discharger shall, no later than the day that this section comes into force, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that,

(a) each flow measurement method used under subsections (4) and (5) meets the accuracy requirements of subsection (6);

(b) each flow measurement method used under subsections (7) and (8) meets the accuracy requirements of subsection (9);

(c) each flow measurement method used under subsection (10) meets the accuracy requirements of subsection (11); and

(d) each flow measurement method used under subsection (12) meets the accuracy requirements of subsection (13).

(15) Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsection (6), (9), (11) or (13), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(16) Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger's plant and shall maintain each flow measurement system according to good operating practices.

(17) Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 215/95, s. 28.

Calculation of Stream and Plant Volumes

29. (1) Each discharger shall calculate, in cubic metres, a daily non-event process effluent plant volume for each day.

(2) For the purposes of subsection (1), a non-event process effluent plant volume for a day is the sum of the daily non-event process effluent volumes for each non-event process effluent monitoring stream determined under section 28 for the day.

(3) Each discharger shall calculate, in cubic metres, a monthly average non-event process effluent plant volume for each month by taking the arithmetic mean of the daily non-event process effluent plant volumes for each non-event process effluent monitoring stream calculated under subsection (1) for the month.

(4) Each discharger shall calculate, in cubic metres, a monthly average volume for each non-event process effluent stream at the discharger's plant for each month, by taking the arithmetic mean of the daily volumes determined under section 28 for the stream for the month.

(5) Each discharger shall calculate, in cubic metres, a monthly average volume for each event process effluent stream of the type described in paragraph 2 of subsection 1 (3) at the discharger's plant for each month by taking the arithmetic mean of the 24-hour volumes determined under section 28 for each 24-hour period ending at noon during which a sample is collected from the stream, or from a tank that discharges into the stream, in the month.

(6) Each discharger shall calculate, in cubic metres, a monthly average volume for each building effluent stream at the discharger's plant for each month, by taking the arithmetic mean of the daily volumes determined under section 28 for the stream for the month. O. Reg. 215/95, s. 29.

PART VII
STORM WATER CONTROL STUDY

STORM WATER CONTROL STUDY

30. (1) Each discharger shall complete a storm water control study in respect of the discharger's plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study" dated August, 1994.

(2) Despite subsection (1), instead of analysing storm water samples for the parameters referred to in the protocol cited in subsection (1), each discharger shall analyze storm water samples for the following parameters:

1. Hydrogen ion (pH), referred to as Analytical Test Group 3 in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.
2. Total Suspended Solids (TSS), referred to as Analytical Test Group 8 in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.
3. Iron, referred to as Analytical Test Group 9a in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.
4. Oil and grease, referred to as Analytical Test Group 25 in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.
5. Polychlorinated Biphenyls, referred to as Analytical Test Group 27 in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994.

(3) A discharger need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study" dated August, 1994; and

(b) the discharger notifies the Director in writing, by April 12, 1996, that the plant meets the exemption criteria referred to in clause (a).

(4) Subject to subsection (5), a discharger shall complete the storm water control study in respect of the discharger's plant by April 14, 1997.

(5) A discharger may postpone completion of the storm water control study in respect of the discharger's plant until April 12, 1999 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices, or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, by April 14, 1997, of the plans referred to in clause (a).

(6) Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger's plant on request during the plant's normal office hours. O. Reg. 215/95, s. 30.

PART VIII
RECORDS AND REPORTS

RECORD KEEPING

31. (1) Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 19, 20, 21, 23 and 27, all calculations performed under sections 11, 12, 13, 14 and 15 and all determinations and calculations made or performed under sections 28 and 29.

(2) Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 6, including, for each sample, the date, the time of pick up, the sampling procedures used and any incidents likely to affect the analytical results.

(3) Each discharger shall keep records of the results of all monitoring performed under sections 22 and 24 to 26.

(4) Each discharger shall keep records of all maintenance and calibration procedures performed under section 28.

(5) Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction and including a description of any remedial action taken.

(6) Each discharger shall keep records of any incident in which effluent that would ordinarily flow past a non-event process effluent sampling point or an event process effluent sampling point is discharged from the discharger's plant without flowing past that sampling point, stating the date, duration, cause and nature of each incident.

(7) Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger's plant.

(8) Each discharger shall keep records of the location of each sampling point established at the discharger's plant under Part II and subsection 24 (19).

(9) Each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(10) Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger's plant on request during the plant's normal office hours. O. Reg. 215/95, s. 31.

REPORTS AVAILABLE TO THE PUBLIC

32. (1) On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of concentrations determined under sections 11 and 12;

(b) a summary of plant loadings calculated under sections 13, 14 and 15;

(c) a summary of the results of monitoring performed under sections 19, 20, 21 and 23 to 27;

(d) a summary of volumes determined under subsection 28 (7) and calculations performed under subsections 29 (4), (5) and (6);

(e) a summary of the concentrations or other results that exceeded a limit prescribed by section 16 or 17; and

(f) a summary of the incidents in which effluent that would ordinarily flow past a non-event process effluent sampling or an event process effluent sampling point is discharged from the discharger's plant without flowing past that sampling point.

(2) Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger's plant on request during the plant's normal office hours.

(3) Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1). O. Reg. 215/95, s. 32.

REPORTS TO THE DIRECTOR — GENERAL

33. (1) Each discharger shall notify the Director in writing of any change of name or ownership of the discharger's plant occurring after April 13, 1995, within 30 days after the end of the month in which the change occurs.

(2) Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger's plant, within 30 days of the change or redirection.

(3) A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week's duration. O. Reg. 215/95, s. 33.

REPORTS TO THE DIRECTOR ON COMPLIANCE WITH SECTION 5 AND PART IV

34. (1) Each discharger shall report any incident in which effluent that would ordinarily flow past a non-event process effluent sampling point or an event process effluent sampling point is discharged from the discharger's plant without flowing past that sampling point.

(2) Each discharger shall report any concentration or other result that exceeds a limit prescribed by section 16 or 17.

(3) A report required under subsection (1) or (2) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 215/95, s. 34.

QUARTERLY REPORTS TO THE DIRECTOR

35. (1) No later than 45 days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger's plant throughout the quarter as required by subsections (3) to (8).

(2) A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format and signed by the discharger.

(3) A report under this section shall include all information included in a report given under section 34 during the quarter.

(4) Each discharger shall report,

(a) for each month in the quarter, the monthly average plant loadings and the highest and lowest daily plant loadings calculated for each limited parameter under section 13;

(b) each 24-hour event process effluent stream loading calculated for each limited parameter under subsection 14 (1) that is based on analytical results obtained from a sample collected during the quarter;

(c) each 24-hour event process effluent plant loading calculated for each limited parameter under subsection 14 (3) that is based on 24-hour event process effluent stream loadings required to be reported under clause (b) in respect of the quarter;

(d) for each month in the quarter, each monthly average event process effluent stream loading calculated for each limited parameter under subsection 14 (6); and

(e) each quarterly building effluent plant loading calculated under section 15 for each building parameter for the quarter.

(5) Each discharger shall report, for each month in the quarter, the monthly average concentrations calculated under sections 11 and 12 and the highest and lowest analytical results obtained under sections 19, 20 and 21 for each limited parameter in each non-event process effluent monitoring stream and event process effluent monitoring stream at the discharger's plant.

(6) Each discharger shall report, for each month in the quarter,

(a) each 24-hour volume determined for a stream, other than a stream described in paragraph 2 of subsection 1 (3), under subsection 28 (7) for a 24-hour period ending at noon during which a sample is collected from the stream in the month;

(b) the highest and lowest 24-hour volumes determined under subsection 28 (7) for the stream described in paragraph 2 of subsection 1 (3) of all the 24-hour volumes determined for the stream under subsection 28 (7) for 24-hour periods ending at noon during which a sample is collected from the stream in the month;

(c) the monthly average non-event process effluent plant volume and the highest and lowest daily non-event process effluent plant volumes as calculated under section 29; and

(d) the monthly average volume for each event process effluent stream of the type described in paragraph 2 of subsection 1 (3) at the discharger's plant, as calculated under section 29.

(7) Each discharger shall report, for each month in the quarter, the monthly average volume for each building effluent monitoring stream at the discharger's plant, as calculated under section 29.

(8) Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 23 for each non-event process effluent monitoring stream and event process effluent monitoring stream at the discharger's plant. O. Reg. 215/95, s. 35.

(9) Each discharger shall report, for each day in each month in the quarter, the number of days on which effluent is discharged from,

(a) each non-event process effluent monitoring stream at the discharger's plant;

(b) each event process effluent monitoring stream at the discharger's plant; and

(c) each building effluent monitoring stream at the discharger's plant. O. Reg. 525/95, s. 2.

REPORTS TO THE DIRECTOR ON CHRONIC TOXICITY TESTING

36. (1) Each discharger shall report to the Director the results of all monitoring performed under section 26, together with the date on which each sample was picked up, no later than 60 days after the end of each semi-annual period in which the monitoring was performed.

(2) A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 215/95, s. 36.

37. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 215/95, s. 37.

38. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 215/95, s. 38.

39. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 215/95, s. 39.

SCHEDULE 1
LIST OF REGULATED PLANTS

Plant Name	Location
Atikokan TGS	Atikokan
Bruce Bulk Steam System	Tiverton
Bruce Heavy Water Plant	Tiverton
Bruce NGS - A	Tiverton
Bruce NGS - B	Tiverton
Bruce Nuclear Power Development	Tiverton
Darlington NGS	Darlington
J. C. Keith TGS	Windsor
Lakeview TGS	Mississauga
Lambton TGS	Courtright

Lennox TGS	S. Fredericksburgh
Nanticoke TGS	Nanticoke
Pickering NGS - A and B	Pickering
R. L. Hearn TGS	Toronto
Thunder Bay TGS	Thunder Bay
Explanatory Notes: TGS = Thermal Generating Station NGS = Nuclear Generating Station	

O. Reg. 174/99, s. 2.

SCHEDULE 2
TYPES OF NON-EVENT PROCESS EFFLUENT STREAMS, LIMITS, MONITORING FREQUENCY

PLANT: Atikokan TGS					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ATWE	D	70.0	25.0
		WTPE	D	70.0	25.0
9	Aluminum	ATWE	W	13.0	4.50
		WTPE	W	13.0	4.50
9a	Iron	ATWE	W	2.50	1.0
		WTPE	W	2.50	1.0
25	Oil and grease	OWSE	W	29.0	13.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
ATWE = a stream of the type described in paragraph 3 of subsection 1 (2)
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
OWSE = a stream of the type described in paragraph 6 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Bruce Bulk Steam System					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	WTPE	D	70.0	25.0
9	Aluminum	WTPE	W	13.0	4.50
9a	Iron	WTPE	W	2.50	1.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Bruce Heavy Water Plant					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
15	Sulphide	EUSPE	D	0.8	-

Explanatory Notes:
Types of Non-Event Process Effluent Streams:

EUSPE = a stream of the type described in paragraph 7 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Bruce NGS - A					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	WTPE	D	70.0	25.0
9	Aluminum	WTPE	W	13.0	4.50
9a	Iron	WTPE	W	2.50	1.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Bruce NGS - B					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	WTPE	D	70.0	25.0
9	Aluminum	WTPE	W	13.0	4.50
9a	Iron	WTPE	W	2.50	1.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Bruce Nuclear Power Development					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
1a	Biochemical Oxygen Demand (5 Day)	ISTPE	W	-	25.0
4a	Ammonia plus Ammonium	ISTPE	W	-	7.0
6	Total phosphorus	ISTPE	W	-	1.0
8	Total Suspended Solids	ISTPE	D	44.0	18.0
25	Oil and grease	ISTPE	W	38.0	12.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
ISTPE = a stream of the type described in paragraph 2 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Darlington NGS					
ATG	Parameter	Types of Non-Event Process Effluent	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit

		Streams			
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
1a	Biochemical Oxygen Demand (5 Day)	ISTPE	W	-	25.0
4a	Ammonia plus Ammonium	ISTPE	W	-	7.0
6	Total Phosphorus	ISTPE	W	-	4.60
8	Total Suspended Solids	ISTPE	D	44.0	18.0
		WTPE	D	70.0	25.0
9	Aluminum	WTPE	W	13.0	4.50
9a	Iron	WTPE	W	2.50	1.0
25	Oil and grease	ISTPE	W	38.0	12.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
ISTPE = a stream of the type described in paragraph 2 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: J.C. Keith TGS					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ATWE	D	70.0	25.0
		WTPE	D	70.0	25.0
9	Aluminum	ATWE	W	13.0	4.50
		WTPE	W	13.0	4.50
9a	Iron	ATWE	W	2.50	1.0
		WTPE	W	2.50	1.0
25	Oil and grease	OWSE	W	29.0	13.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
ATWE = a stream of the type described in paragraph 3 of subsection 1 (2)
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
OWSE = a stream of the type described in paragraph 6 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Lakeview TGS					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ATWE	D	70.0	25.0
		BSWE	D	70.0	25.0
		AQWE	D	70.0	25.0
9	Aluminum	ATWE	W	13.0	4.50
		BSWE	W	13.0	4.50
		AQWE	W	13.0	4.50
9a	Iron	ATWE	W	2.50	1.0
		BSWE	W	2.50	1.0
		AQWE	W	2.50	1.0
25	Oil and grease	OWSE	W	29.0	13.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
ATWE = a stream of the type described in paragraph 3 of subsection 1 (2)

BSWE = a stream of the type described in paragraph 5 of subsection 1 (2)
AQWE = a stream of the type described in paragraph 4 of subsection 1 (2)
OWSE = a stream of the type described in paragraph 6 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Lambton TGS					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ATWE	D	70.0	25.0
		BSWE	D	70.0	25.0
		AQWE	D	70.0	25.0
9	Aluminum	ATWE	W	13.0	4.50
		BSWE	W	13.0	4.50
		AQWE	W	13.0	4.50
9a	Iron	ATWE	W	2.50	1.0
		BSWE	W	2.50	1.0
		AQWE	W	2.50	1.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
ATWE = a stream of the type described in paragraph 3 of subsection 1 (2)
BSWE = a stream of the type described in paragraph 5 of subsection 1 (2)
AQWE = a stream of the type described in paragraph 4 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Lennox TGS					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	WTPE	D	70.0	25.0
9	Aluminum	WTPE	W	13.0	4.50
9a	Iron	WTPE	W	2.50	1.0
25	Oil and grease	OWSE	W	29.0	13.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
OWSE = a stream of the type described in paragraph 6 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Nanticoke TGS					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ATWE	D	70.0	25.0
		BSWE	D	70.0	25.0
		AQWE	D	70.0	25.0
		ATLE	D	70.0	25.0

9	Aluminum	ATWE	W	13.0	4.50
		BSWE	W	13.0	4.50
		AQWE	W	13.0	4.50
		ATLE	W	13.0	4.50
9a	Iron	ATWE	W	2.50	1.0
		BSWE	W	2.50	1.0
		AQWE	W	2.50	1.0
		ATLE	W	2.50	1.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
ATWE = a stream of the type described in paragraph 3 of subsection 1 (2)
BSWE = a stream of the type described in paragraph 5 of subsection 1 (2)
AQWE = a stream of the type described in paragraph 4 of subsection 1 (2)
ATLE = a stream of the type described in paragraph 8 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Pickering NGS - A and B					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	WTPE	D	70.0	25.0
9	Aluminum	WTPE	W	13.0	4.50
9a	Iron	WTPE	W	2.50	1.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: R.L. Hearn TGS					
ATG	Parameter	Types of Non-Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ATWE	D	70.0	25.0
		WTPE	D	70.0	25.0
9	Aluminum	ATWE	W	13.0	4.50
		WTPE	W	13.0	4.50
9a	Iron	ATWE	W	2.50	1.0
		WTPE	W	2.50	1.0
25	Oil and grease	OWSE	W	29.0	13.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
ATWE = a stream of the type described in paragraph 3 of subsection 1 (2)
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
OWSE = a stream of the type described in paragraph 6 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Thunder Bay TGS					
ATG	Parameter	Types of Non-Event	Monitoring Frequency	Daily Concentration	Monthly Average Concentration

		Process Effluent Streams		Limit	Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ATWE	D	70.0	25.0
		WTPE	D	70.0	25.0
9	Aluminum	ATWE	W	13.0	4.50
		WTPE	W	13.0	4.50
9a	Iron	ATWE	W	2.50	1.0
		WTPE	W	2.50	1.0
25	Oil and grease	OWSE	W	29.0	13.0

Explanatory Notes:
Types of Non-Event Process Effluent Streams:
ATWE = a stream of the type described in paragraph 3 of subsection 1 (2)
WTPE = a stream of the type described in paragraph 1 of subsection 1 (2)
OWSE = a stream of the type described in paragraph 6 of subsection 1 (2)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

O. Reg. 215/95, Sched. 2.

SCHEDULE 3

TYPES OF EVENT PROCESS EFFLUENT STREAMS, LIMITS, MONITORING FREQUENCY

PLANT: Atikokan TGS					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	CSSE	D	25.0	-
		ECE	D	25.0	-
9a	Iron	CSSE	D	1.0	-
		ECE	D	1.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
CSSE = a stream of the type described in paragraph 1 of subsection 1 (3)
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Bruce Bulk Steam System					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ECE	D	25.0	-
9a	Iron	ECE	D	1.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Bruce Heavy Water Plant					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5

8	Total Suspended Solids	ECE	D	25.0	-
9a	Iron	ECE	D	1.0	-
15	Sulphide	HLE	D	0.8	-

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
HLE = a stream of the type described in paragraph 5 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Bruce NGS - A					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
6	Total Phosphorus	RLWMSTE	W	-	1.0
8	Total Suspended Solids	ECE	D	25.0	-
		RLWMSTE	D	73.0	21.0
9	Zinc	RLWMSTE	W	1.0	0.50
9a	Iron	ECE	D	1.0	-
		RLWMSTE	W	9.0	3.0
25	Oil and grease	RLWMSTE	W	36.0	13.0

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
RLWMSTE = a stream of the type described in paragraph 2 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Bruce NGS - B					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
6	Total Phosphorus	RLWMSTE	W	-	1.0
8	Total Suspended Solids	ECE	D	25.0	-
		RLWMSTE	D	73.0	21.0
9	Zinc	RLWMSTE	W	1.0	0.50
9a	Iron	ECE	D	1.0	-
		RLWMSTE	W	9.0	3.0
25	Oil and grease	RLWMSTE	W	36.0	13.0

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
RLWMSTE = a stream of the type described in paragraph 2 of subsection 1 (3)
OWSE = a stream of the type described in paragraph 4 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Bruce Nuclear Power Development					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ECE	D	25.0	-
9a	Iron	ECE	D	1.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Darlington NGS					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
6	Total Phosphorus	RLWMSTE	W	-	1.0
8	Total Suspended Solids	ECE	D	25.0	-
		RLWMSTE	D	73.0	21.0
9	Zinc	RLWMSTE	W	1.0	0.50
9a	Iron	ECE	D	1.0	-
		RLWMSTE	W	9.0	3.0
25	Oil and grease	RLWMSTE	W	36.0	13.0
		OWSE	D	15.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
RLWMSTE = a stream of the type described in paragraph 2 of subsection 1 (3)
OWSE = a stream of the type described in paragraph 4 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: J. C. Keith TGS					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ECE	D	25.0	-
9a	Iron	ECE	D	1.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
CSSE = a stream of the type described in paragraph 1 of subsection 1 (3)
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Lakeview TGS					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	CSSE	D	25.0	-
		ECE	D	25.0	-
9a	Iron	CSSE	D	1.0	-
		ECE	D	1.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
CSSE = a stream of the type described in paragraph 1 of subsection 1 (3)
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Lambton TGS					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ECE	D	25.0	-
		CSSE	W	70.0	25.0
9	Aluminum	CSSE	W	13.0	4.50
9a	Iron	ECE	D	1.0	-
		CSSE	W	2.50	1.0

Explanatory Notes:
Types of Event Process Effluent Streams:
CSSE = a stream of the type described in paragraph 1 of subsection 1 (3)
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: Lennox TGS					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ECE	D	25.0	-
9a	Iron	ECE	D	1.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Nanticoke TGS					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ECE	D	25.0	-
9a	Iron	ECE	D	1.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Pickering NGS - A and B					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
6	Total Phosphorus	RLWMSTE	W	-	1.0
8	Total Suspended Solids	ECE	D	25.0	-
		RLWMSTE	D	73.0	21.0
9	Zinc	RLWMSTE	W	1.0	0.50
9a	Iron	ECE	D	1.0	-
		RLWMSTE	W	9.0	3.0
25	Oil and grease	RLWMSTE	W	36.0	13.0
		OWSE	D	15.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
RLWMSTE = a stream of the type described in paragraph 2 of subsection 1 (3)
OWSE = a stream of the type described in paragraph 4 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement
W Weekly monitoring requirement

PLANT: R. L. Hearn TGS					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ECE	D	25.0	-
9a	Iron	ECE	D	25.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

PLANT: Thunder Bay TGS					
ATG	Parameter	Types of Event Process Effluent Streams	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
				mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4	Column 5
8	Total Suspended Solids	ECE	D	25.0	-
9a	Iron	ECE	D	1.0	-

Explanatory Notes:
Types of Event Process Effluent Streams:
ECE = a stream of the type described in paragraph 3 of subsection 1 (3)
ATG Analytical Test Group
mg/L milligrams per litre
D Daily monitoring requirement

O. Reg. 215/95, Sched. 3.

Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 537/93

Amended to O. Reg. 524/95

EFFLUENT MONITORING AND EFFLUENT LIMITS — PETROLEUM SECTOR

Notice of Currency:* This document is up to date.

*This notice is usually current to within two business days of accessing this document. For more current amendment information, see the Table of Regulations (Legislative History).

This Regulation is made in English only.

PART I
GENERAL

INTERPRETATION

1. (1) In this Regulation,

"assessment parameter" means a parameter that is listed in Schedule 3;

"blowdown water" means recirculating water that is discharged from a cooling water system for the purpose of controlling the level of water in the cooling water system or for the purpose of discharging from the cooling water system materials contained in the cooling water system the further build-up of which would impair the operation of the system;

"cooling water effluent" means water and associated material that is used in an industrial process for the purpose of removing heat and that has not, by design, come into contact with process materials, but does not include blowdown water;

"cooling water effluent monitoring stream" means a cooling water effluent stream on which a sampling point is established under section 8;

"cooling water effluent sampling point" means a sampling point established on a cooling water effluent stream under section 8;

"crude oil" means any naturally occurring petroleum or any mixture of hydrocarbons that is brought into a plant for processing, but does not include any hydrocarbon or residual fuel that is brought into a plant primarily to meet the fuel operating requirements of the plant or primarily for direct blending into finished products;

"Director", in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger's plant is located and includes an alternate named by the Director;

"discharger" means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

"limited parameter", in relation to a plant, means a parameter for which a limit is specified for the plant in Column 3 or 4 of Schedule 2;

"pick up", in relation to a sample, means pick up for the purpose of transportation to and analysis at a laboratory;

"plant" means an industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;

"process change" means a change in equipment, production processes, process materials or treatment processes;

"process effluent" means,

(a) effluent that, by design, has come into contact with process materials,

(b) blowdown water,

(c) effluent that results from cleaning or maintenance operations at a plant during a period when all or part of the plant is shut down, and

(d) any effluent described in clauses (a) to (c) combined with cooling water effluent or storm water effluent;

"process effluent monitoring stream" means a process effluent stream on which a sampling point is established under section 8;

"process effluent sampling point" means a sampling point established on a process effluent stream under section 8;

"process materials", in relation to a discharger's plant, means raw materials for use in an industrial process at the plant, manufacturing intermediates produced at the plant, or products or by-products of an industrial process at the plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

"quarter" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"semi-annual period" means all or part of a period of six months beginning on the first day of January or July;

"specific parameter", in relation to a plant, means 2, 3, 7, 8-tetrachlorodibenzo-para-dioxin, 2, 3, 7, 8-tetrachlorodibenzofuran, and 2, 3, 7, 8 substituted dioxin and furan congeners;

"storm water effluent" means run-off from a storm event or thaw that is not used in any industrial process.

(2) For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(3) An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger's behalf. O. Reg. 537/93, s. 1.

PURPOSE

2. The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants listed in Schedule 1. O. Reg. 537/93, s. 2.

APPLICATION

3. (1) This Regulation applies only with respect to the plants listed in Schedule 1. O. Reg. 537/93, s. 3 (1).

(2) This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer. O. Reg. 537/93, s. 3 (2); O. Reg. 524/95, s. 1.

OBLIGATIONS UNDER APPROVALS, ORDERS, ETC.

4. For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 524/95, s. 2.

NON-APPLICATION OF GENERAL EFFLUENT MONITORING REGULATION

5. This Regulation is not a Sectoral Effluent Monitoring Regulation within the meaning of Ontario Regulation 695/88. O. Reg. 537/93, s. 5.

BY-PASSES

6. Beginning on January 1, 1996, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger's plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 524/95, s. 3.

SAMPLING AND ANALYTICAL PROCEDURES

7. (1) Each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994. O. Reg. 537/93, s. 7 (1); O. Reg. 524/95, s. 4.

(2) Each discharger shall maintain the sampling equipment used at the discharger's plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of each limited parameter, assessment parameter and specific parameter from the plant. O. Reg. 537/93, s. 7 (2).

PART II
SAMPLING POINTS

ESTABLISHMENT AND ELIMINATION OF SAMPLING POINTS

8. (1) Each discharger shall, by December 9, 1993, establish a sampling point on each process effluent and cooling water effluent stream at the discharger's plant, as necessary so that the plant loadings calculated under sections 12 and 13 for each limited parameter and assessment parameter and the concentrations determined for each specific parameter accurately reflect the level of discharge of each such parameter from the plant.

(2) If circumstances change so that a new sampling point is necessary at a discharger's plant in order to permit the calculation of plant loadings under sections 12 and 13 for each limited parameter and assessment parameter and the determination of concentrations for each specific parameter that accurately reflect the level of discharge of each such parameter from the plant, the discharger shall, within thirty days of the change, establish the new sampling point.

(3) A discharger may eliminate a sampling point established under subsection (1) or (2) if the sampling point is no longer necessary to permit the calculation of plant loadings under sections 12 and 13 for each limited parameter and assessment parameter and the determination of concentrations for each specific parameter that accurately reflect the level of discharge of each such parameter from the plant.

(4) For the purposes of this section, a plant loading for a parameter or a concentration for a parameter that is based on analytical results that are significantly affected by dilution or masking due to the merging of streams upstream of a sampling point at a plant is not a loading or a concentration that accurately reflects the level of discharge of the parameter from the plant.

(5) In determining what is necessary to meet a discharger's obligations to establish sampling points under this section, the discharger shall consider both which streams should have sampling points and where on a stream a sampling point should be located. O. Reg. 537/93, s. 8.

(6) Despite subsection (1), a discharger need not establish a sampling point on a by-pass. O. Reg. 524/95, s. 5.

REPORTS ON SAMPLING POINTS

9. (1) By December 20, 1993, each discharger shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger's plant as of December 9, 1993.

(2) Within thirty days after establishing a sampling point under this Regulation that is not shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing the location of the sampling point, together with a revised list and plot plan showing the sampling point.

(3) Within thirty days after eliminating a sampling point under this Regulation that is shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point. O. Reg. 537/93, s. 9.

USE OF SAMPLING POINTS ESTABLISHED UNDER THIS PART

10. Subject to section 21, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 537/93, s. 10.

PART III
CACULATION OF LOADINGS

CALCULATION OF LOADINGS — GENERAL

11. (1) For the purposes of performing a calculation under sections 12 and 13, a discharger shall use the actual analytical result obtained by the laboratory. O. Reg. 537/93, s. 11 (1).

(2) Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994, the discharger shall use the value zero for the purpose of performing a calculation under sections 12 and 13. O. Reg. 537/93, s. 11 (2); O. Reg. 524/95, s. 6.

(3) Each discharger shall ensure that each calculation of a process effluent loading required by section 12 is performed as soon as reasonably possible after the analytical result on which the calculation is based becomes available to the discharger.

(4) Each discharger shall ensure that each calculation of a cooling water effluent loading required by section 13 is performed in time to comply with subsection 33 (4). O. Reg. 537/93, s. 11 (3, 4).

CALCULATION OF LOADINGS — PROCESS EFFLUENT

12. (1) Each discharger shall calculate, in kilograms, a daily process effluent stream loading for each limited parameter in each process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 26, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily process effluent plant loading for each limited parameter for each day for which the discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1), the daily process effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily process effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average process effluent plant loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average process effluent plant loading for a parameter for a month is the arithmetic mean of the daily process effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 537/93, s. 12.

CALCULATION OF LOADINGS — COOLING WATER

13. (1) Each discharger shall calculate, in kilograms, a daily cooling water effluent stream loading for each assessment parameter in each cooling water effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 26, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily cooling water effluent plant loading for each assessment parameter for each day for which the discharger is required to calculate a daily cooling water effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily cooling water effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily cooling water effluent stream loading for a parameter for a day under subsection (1), the daily cooling water effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily cooling water effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average cooling water effluent plant loading for each assessment parameter for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average cooling water effluent plant loading for a parameter for a month is the arithmetic mean of the daily cooling water effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 537/93, s. 13.

PART IV
PARAMETER AND LETHALITY LIMITS

PARAMETER LIMITS

14. (1) Each discharger shall ensure that each daily process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2.

(2) Each discharger shall ensure that each monthly average process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the monthly average plant loading limit specified for the parameter and the plant in Column 4 of Schedule 2.

(3) Each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the concentration of 2, 3, 7, 8-tetrachlorodibenzo-para-dioxin and the concentration of 2, 3, 7, 8-tetrachlorodibenzofuran are both non-measurable in any sample collected at a process effluent sampling point at the plant.

(4) For the purposes of subsection (3), the concentration of 2, 3, 7, 8-tetrachlorodibenzo-para-dioxin in a sample is non-measurable if analysis of the sample shows a concentration of 2, 3, 7, 8-tetrachlorodibenzo-para-dioxin of less than 20 picograms per litre and the concentration of 2, 3, 7, 8-tetrachlorodibenzofuran in a sample is non-measurable if analysis of the sample shows a concentration of 2, 3, 7, 8-tetrachlorodibenzofuran of less than 50 picograms per litre. O. Reg. 537/93, s. 14 (1-4).

(5) Each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the total toxic equivalent concentration of 2, 3, 7, 8 substituted dioxin and furan congeners in any sample collected at a process effluent sampling point at the plant, calculated in accordance with the methods described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994, does not exceed 60 picograms per litre. O. Reg. 537/93, s. 14 (5); O. Reg. 524/95, s. 7.

(6) Subject to subsection (7), each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the pH value of any sample collected at a process effluent sampling point at the plant is within the range of 6.0 to 9.5.

(7) Throughout any day on which a discharger has used an alternate sampling point on a process effluent monitoring stream for sampling required by section 21, as permitted by subsections 21 (7) and (8), the discharger,

(a) shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

(b) need not comply with subsection (6) with respect to the stream. O. Reg. 537/93, s. 14 (6, 7).

LETHALITY LIMITS

15. Each discharger shall control the quality of each process effluent monitoring stream and each cooling water effluent monitoring stream at the discharger's plant to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a process effluent sampling point or cooling water effluent sampling point at the plant results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 537/93, s. 15.

PART V
MONITORING

MONITORING — GENERAL

16. (1) Despite sections 17 to 25, a discharger need not collect samples from any stream at the discharger's plant on a day on which there is no process effluent that is being discharged from the plant.

(2) Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters, the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(3) A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(4) Subject to subsection (5), each discharger shall pick up all sets of samples required to be picked up at the discharger's plant under sections 17, 18 and 19 between the hours of 7 a.m. and 10 a.m.

(5) If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger's plant are such that it would be impractical to pick up a set of samples from each sampling point established at the plant under this Regulation within the time period specified in subsection (4), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (4).

(6) Subject to subsections (7) and (8), where a discharger is required by section 17, 18 or 19 to pick up a set of samples, the discharger shall pick up a set collected over the twenty-four-hour period immediately preceding the pick-up.

(7) The twenty-four-hour period referred to in subsection (6) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (4) or of a different three-hour period specified in a notice under subsection (5).

(8) Where a notice has been given under subsection (5), respect of a plant specifying a time period longer than three hours, the twenty-four-hour period referred to in subsection (6) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(9) If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (5) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (5) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 537/93, s. 16.

MONITORING — PROCESS EFFLUENT — DAILY

17. (1) Each discharger shall, on each day, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is daily.

(2) A discharger need not meet the requirements of subsection (1) where it is impossible to do so because of sampling by a provincial officer. O. Reg. 537/93, s. 17.

MONITORING — PROCESS EFFLUENT — WEEKLY

18. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 537/93, s. 18.

MONITORING — PROCESS EFFLUENT — QUARTERLY

19. (1) Each discharger shall, on one day in each quarter, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is quarterly.

(2) There shall be an interval of at least forty-five days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a quarter shall be picked up on the same day in the quarter. O. Reg. 537/93, s. 19.

MONITORING — PROCESS EFFLUENT — QUALITY CONTROL

20. (1) On one day in each year after 1993, on a day on which samples are picked up at the plant under subsection 18 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 18 (1) at one process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly. O. Reg. 537/93, s. 20 (1).

(2) Each discharger shall prepare a travelling blank and travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994. O. Reg. 537/93, s. 20 (2); O. Reg. 524/95, s. 8.

(3) There shall be an interval of at least six months between successive pick-up days at the plant under subsection (1). O. Reg. 537/93, s. 20 (3).

MONITORING — PROCESS EFFLUENT — pH MEASUREMENT

21. (1) Each discharger shall, on each day during the time period applicable to the plant under subsection 16 (4) or (5), collect a grab sample from each process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(2) Each discharger shall, within each twenty-four-hour period beginning with the collection of the first grab sample at the plant under subsection (1) on each day, collect two more grab samples from each process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(3) There shall be an interval of at least four hours between each of the three collections at a stream under subsections (1) and (2) in each twenty-four-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within twenty-four hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each day during the time period applicable to the plant under subsection 16 (4) or (5), and two more times in each twenty-four-hour period beginning with the first analysis at the plant under this subsection in each day.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each twenty-four-hour period.

(7) For the purposes of this section, a discharger shall use either the sampling point established under section 8 on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(8) Before using an alternate sampling point under subsection (7), a discharger shall give the Director a written notice describing the location of the alternate sampling point, together with a revised version of the list and plot plan submitted under section 9 showing the alternate sampling point. O. Reg. 537/93, s. 21.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

22. (1) Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" dated July, 1990.

(2) Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) On one day in each month, on a day on which samples are picked up at the plant under subsection 18 (1), each discharger shall collect and immediately pick up a grab sample at each process effluent sampling point at the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(4) There shall be an interval of at least fifteen days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(6) Where a discharger has performed tests under subsection (3) for twelve consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(7) Samples picked up at a plant under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(8) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection 18 (1).

(9) There shall be an interval of at least forty-five days between successive pick-up days at the plant under subsection (6).

(10) All samples picked up under subsection (6) in a quarter shall be picked up on the same day in the quarter.

(11) If a rainbow trout acute lethality test performed under subsection (6) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (6) to (10) cease to apply in respect to samples from that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further twelve consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

(12) A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger's plant, within thirty days after the day on which the change begins. O. Reg. 537/93, s. 22 (1-12).

(13), (14) REVOKED: O. Reg. 537/93, s. 22 (15).

(15) SPENT: O. Reg. 537/93, s. 22 (15).

(16) Subsections (2) to (15) apply with necessary modifications to each cooling water effluent sampling point and, for the purpose, the reference in subsection (3) to each process effluent sampling point shall be deemed to be a reference to each cooling water effluent sampling point and the reference in subsections (3) and (8) to subsection 18 (1) shall be deemed to be a reference to subsection 25 (1). O. Reg. 537/93, s. 22 (16).

MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

23. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*" dated July, 1990.

(2) Subsections 22 (2) to (16) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna.*

(3) Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger's plant under this section on a day on which the discharger collects a sample from the sampling point under section 22, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 22. O. Reg. 537/93, s. 23.

MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

24. (1) Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows" dated February, 1992.

(2) Where a discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*" dated February, 1992.

(3) On one day in each semi-annual period, on a day on which samples are picked up at the plant under subsection 18 (1), each discharger shall collect and immediately pick up a grab sample from each process effluent sampling point at the discharger's plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

(4) There shall be an interval of at least ninety days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a semi-annual period shall be picked up on the same day in the semi-annual period.

(6) A discharger need not collect a sample from a sampling point in accordance with subsection (3) until twelve consecutive monthly rainbow trout acute lethality tests and twelve consecutive monthly *Daphnia magna* acute lethality tests

performed on samples collected at the sampling point at a discharger's plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 537/93, s. 24.

MONITORING — COOLING WATER EFFLUENT — WEEKLY ASSESSMENT

25. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each cooling water effluent sampling point at the discharger's plant and shall analyze each set of samples for each assessment parameter.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 537/93, s. 25.

PART VI
EFFLUENT VOLUME

FLOW MEASUREMENT

26. (1) For the purposes of this section, a volume of effluent for a stream for a day is the volume that flowed past the sampling point established under Part II on the stream during the twenty-four hour period preceding the pick-up of the first sample picked up from the stream for the day.

(2) Each discharger shall determine in cubic metres a daily volume of effluent for each process effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(3) Despite subsection (2), where a process effluent stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of individual batch volume measurements.

(4) Each discharger shall use flow measurement methods that allow the daily volumes for process effluent streams to be determined to an accuracy of within plus or minus 15 per cent.

(5) Each discharger shall determine in cubic metres a daily volume of effluent for each cooling water effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(6) Each discharger shall use flow measurement methods that allow the daily volumes for cooling water effluent streams to be determined to an accuracy of within plus or minus 20 per cent.

(7) Each discharger shall, no later than the day that this section comes into force, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each flow measurement method used under subsections (2) and (3) meets the accuracy requirements of subsection (4) and that each flow measurement method used under subsection (5) meets the accuracy requirements of subsection (6).

(8) Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsection (4) or (6), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(9) Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger's plant and shall maintain each flow measurement system according to good operating practices.

(10) Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 537/93, s. 26.

CALCULATION OF PLANT VOLUMES

27. (1) Each discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

(2) For the purposes of subsection (1), a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under section 26 for the day.

(3) Each discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) for the month.

(4) Each discharger shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.

(5) For the purposes of subsection (4), a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under section 26 for the day.

(6) Each discharger shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection (4) for the month. O. Reg. 537/93, s. 27.

PART VII
STORM WATER CONTROL STUDY

28. (1) Each discharger shall complete a storm water control study in respect of the discharger's plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study" dated August, 1994. O. Reg. 537/93, s. 28 (1); O. Reg. 524/95, s. 9 (1).

(2) A discharger need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study" dated August, 1994; and

(b) the discharger notifies the Director in writing, by September 12, 1994, that the plant meets the exemption criteria referred to in clause (a). O. Reg. 537/93, s. 28 (2); O. Reg. 524/95, s. 9 (2).

(3) Subject to subjection (4), a discharger shall complete the storm water control study in respect of the discharger's plant by September 11, 1995.

(4) A discharger may postpone completion of the storm water control study in respect of the discharger's plant until January 1, 1997 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices, or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant: and

(b) the discharger notifies the Director in writing, by September 11, 1995, of the plans referred to in clause (a).

(5) Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 537/93, s. 28 (3-5).

PART VIII
RECORDS AND REPORTS

Record Keeping

29. (1) Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 17, 18, 19, 21 and 25, all calculations performed under sections 12 and 13 and all determinations and calculations made or performed under sections 26 and 27.

(2) Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 7, including, for each sample, the date, the time of pick-up, the sampling procedures used and any incidents likely to affect the analytical results.

(3) Each discharger shall keep records of the results of all monitoring performed under sections 20 and 22 to 24.

(4) Each discharger shall keep records of all maintenance and calibration procedures performed under section 26.

(5) Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction, and including a description of any remedial action taken.

(6) Each discharger shall keep records of any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged, stating the date, duration, cause and nature of each incident.

(7) Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger's plant.

(8) Each discharger shall keep records of the amount of crude oil, calculated in cubic metres, that is processed daily at the discharger's plant.

(9) Each discharger shall keep records of the location of each sampling point established at the discharger's plant under Part II.

(10) Each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(11) Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 537/93, s. 29.

Reports Available to the Public

30. (1) On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of plant loadings calculated under sections 12 and 13;

(b) a summary of the results of monitoring performed under sections 17, 18 and 19 and 21 to 25;

(c) a summary of calculations performed under subsections 27 (1) and (4);

(d) a summary of the loadings, concentrations or other results that exceeded a limit prescribed by section 14 or 15; and

(e) a summary of the incidents in which process effluent was discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged.

(2) Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger's plant, on request, during the plant's normal office hours.

(3) Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1). O. Reg. 537/93, s. 30.

REPORTS TO THE DIRECTOR — GENERAL

31. (1) Each discharger shall notify the Director in writing of any change of name or ownership of the discharger's plant occurring after September 10, 1993, within thirty days after the end of the month in which the change occurs.

(2) Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger's plant, within thirty days of the change or redirection.

(3) A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week's duration.

(4) Each discharger shall notify the Director in writing if the discharger's plant has, for more than ninety consecutive days, operated at less than 75 per cent of the reference production rate specified in Schedule 4 for the discharger's plant, within thirty days of the end of the ninety-day period. O. Reg. 537/93, s. 31.

REPORTS TO THE DIRECTOR ON COMPLIANCE WITH SECTION 6 AND PART IV

32. (1) Each discharger shall report any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged.

(2) Each discharger shall report any loading, concentration or other result that exceeds a limit prescribed by section 14 or 15.

(3) A report required under subsection (1) or (2) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 537/93, s. 32.

QUARTERLY REPORTS TO THE DIRECTOR

33. (1) No later than forty-five days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger's plant throughout the quarter as required by subsections (3) to (8).

(2) A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format and signed by the discharger.

(3) A report under this section shall include all information included in a report given under section 32 during the quarter.

(4) Each discharger shall report, for each month in the quarter, the monthly average plant loadings and the highest and lowest daily plant loadings calculated under sections 12 and 13 for each limited parameter and each assessment parameter.

(5) Each discharger shall report, for each month in the quarter, the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under section 27.

(6) Each discharger shall report, for each month in the quarter, the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under section 27.

(7) Each discharger shall report the number of days in each month in the quarter on which process effluent was discharged from the discharger's plant.

(8) Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 21 for each process effluent monitoring stream at the discharger's plant. O. Reg. 537/93, s. 33.

REPORTS TO THE DIRECTOR ON CHRONIC TOXICITY TESTING

34. (1) Each discharger shall report to the Director the results of all monitoring performed under section 24, together with the date on which each sample was picked up, no later than sixty days after the end of each semi-annual period in which the monitoring was performed.

(2) A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 537/93, s. 34.

SCHEDULE 1
LIST OF REGULATED PLANTS

Plant Name	Location	Owner as of August, 1993
Imperial Oil Limited, Sarnia Refinery	Sarnia	Imperial Oil Limited
Imperial Oil Limited, Nanticoke Refinery	Nanticoke	Imperial Oil Limited
Novacor Chemicals Ltd.	Corunna	Novacor Chemicals Ltd.
Petro-Canada, Lubricants Centre (Formerly: Petro-Canada Products — Lake Ontario Refinery Mississauga Plant)	Mississauga	Petro-Canada
Petro-Canada — Oakville Refinery (Formerly: Petro-Canada Products — Lake Ontario Refinery Oakville Plant)	Oakville	Petro-Canada
Shell Canada Products Ltd.	Sarnia	Shell Canada Products Ltd.
Sunoco Inc.	Sarnia	Suncor Inc.

O. Reg. 524/95, s. 10.

SCHEDULE 2
PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

PLANT: Imperial Oil Limited, Sarnia Refinery				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	632	219
5a	Dissolved Organic Carbon (DOC)	W	1465	859
6	Total Phosphorus	W	—	41
8	Total Suspended Solids (TSS)	W	—	947
	Volatile Suspended Solids (VSS)	D	1364	738
14	Phenolics (4AAP)	D	1.9	0.65
15	Sulphide	W	12.6	6.3
25	Oil and Grease	W	674	316
24	2, 3, 7, 8-tetrachlorodibenzo-para-dioxin	Q		
	2, 3, 7, 8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = kilograms per day
TEQ = total toxic equivalent of 2, 3, 7, 8 substituted dioxin and furan congeners

PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

PLANT: Imperial Oil Limited, Nanticoke Refinery				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	123	43
5a	Dissolved Organic Carbon (DOC)	W	285	167
6	Total Phosphorus	W	—	8
8	Total Suspended Solids (TSS)	W	—	184
	Volatile Suspended Solids (VSS)	D	265	144
14	Phenolics (4AAP)	D	0.37	0.13
15	Sulphide	W	2.5	1.2
25	Oil and Grease	W	131	61
24	2, 3, 7, 8-tetrachlorodibenzo-para-dioxin	Q		
	2, 3, 7, 8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
D = Daily monitoring requirement

W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
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TEQ = total toxic equivalent of 2, 3, 7, 8 substituted dioxin and furan congeners

PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

PLANT: Novacor Chemicals Ltd., Corunna				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	188	65
5a	Dissolved Organic Carbon (DOC)	W	436	256
6	Total Phosphorus	W	—	12
8	Total Suspended Solids (TSS)	W	—	282
	Volatile Suspended Solids (VSS)	D	406	220
14	Phenolics (4AAP)	D	0.57	0.19
15	Sulphide	W	3.8	1.9
25	Oil and Grease	W	201	94
24	2, 3, 7, 8-tetrachlorodibenzo-para-dioxin	Q		
	2, 3, 7, 8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = kilograms per day
TEQ = total toxic equivalent of 2, 3, 7, 8 substituted dioxin and furan congeners

PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

PLANT: Petro-Canada, Lubricants Centre				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	161	56
5a	Dissolved Organic Carbon (DOC)	W	374	220
6	Total Phosphorus	W	—	11
8	Total Suspended Solids (TSS)	W	—	243
	Volatile Suspended Solids (VSS)	D	350	188
14	Phenolics (4AAP)	D	0.48	0.17
15	Sulphide	W	3.2	1.6
25	Oil and Grease	W	173	81
24	2, 3, 7, 8-tetrachlorodibenzo-para-dioxin	Q		
	2, 3, 7, 8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = kilograms per day
TEQ = total toxic equivalent of 2, 3, 7, 8 substituted dioxin and furan congeners

PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

PLANT: Petro-Canada, Oakville Refinery

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	161	56
5a	Dissolved Organic Carbon (DOC)	W	374	219
6	Total Phosphorus	W	—	10
8	Total Suspended Solids (TSS)	W	—	242
	Volatile Suspended Solids (VSS)	D	348	188
14	Phenolics (4AAP)	D	0.48	0.17
15	Sulphide	W	3.2	1.6
25	Oil and Grease	W	172	81
24	2, 3, 7 ,8-tetrachlorodibenzo-para-dioxin	Q		
	2, 3, 7, 8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = kilograms per day
TEQ = total toxic equivalent of 2, 3, 7, 8 substituted dioxin and furan congeners

PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

PLANT: Shell-Canada Products Ltd., Sarnia				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	157	55
5a	Dissolved Organic Carbon (DOC)	W	365	214
6	Total Phosphorus	W	—	10
8	Total Suspended Solids (TSS)	W	—	236
	Volatile Suspended Solids (VSS)	D	340	184
14	Phenolics (4AAP)	D	0.47	0.16
15	Sulphide	W	3.1	1.6
25	Oil and Grease	W	168	79
24	2, 3, 7, 8-tetrachlorodibenzo-para-dioxin	Q		
	2, 3, 7, 8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = kilograms per day
TEQ = total toxic equivalent of 2, 3, 7, 8 substituted dioxin and furan congeners

PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

PLANT: Sunoco Inc., Sarnia				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
4a	Ammonia plus Ammonium	W	158	55
5a	Dissolved Organic Carbon (DOC)	W	366	214
6	Total Phosphorus	W	—	10
8	Total Suspended Solids (TSS)	W	—	236

	Volatile Suspended Solids (VSS)	D	340	184
14	Phenolics (4AAP)	D	0.47	0.16
15	Sulphide	W	3.2	1.6
25	Oil and Grease	W	168	79
24	2, 3, 7, 8-tetrachlorodibenzo-para-dioxin	Q		
	2, 3, 7, 8-tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:
D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = kilograms per day
TEQ = total toxic equivalent of 2, 3, 7, 8 substituted dioxin and furan congeners

O. Reg. 537/93, Sched. 2; O. Reg. 524/95, s. 11.

SCHEDULE 3
COOLING WATER ASSESSMENT MONITORING REQUIREMENTS

PLANT:	All Plants	
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
14	Phenolics (4AAP)	W
15	Sulphide	W
17	Benzene Toluene	W W

Explanatory Notes:
W = Weekly monitoring requirement
ATG = Analytical Test Group

O. Reg. 537/93, Sched. 3.

SCHEDULE 4
REFERENCE PRODUCTION RATE

Plant Name	Production	Reference Production Rate
Imperial Oil Limited, Sarnia Refinery	Crude Oil Processed	19,900 m3/day
Imperial Oil Limited, Nanticoke Refinery	Crude Oil Processed	18,600 m3/day
Novacor Chemicals Ltd.	Crude Oil Processed	14,600 m3/day
Petro-Canada, Lubricants Centre	Equivalent Crude Oil Processed	12,900 m3/day
Petro-Canada, Oakville Refinery	Crude Oil Processed	14,150 m3/day
Shell Canada Products Ltd.	Crude Oil Processed	11,300 m3/day
Sunoco Inc.	Crude Oil Processed	11,900 m3/day

O. Reg. 524/95, s. 12.

Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 560/94

Amended to O. Reg. 169/96

EFFLUENT MONITORING AND EFFLUENT LIMITS — METAL MINING SECTOR

Notice of Currency:* This document is up to date.

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This Regulation is made in English only.

PART I
GENERAL

INTERPRETATION

1. (1) In this Regulation,

"assessment parameter" means a parameter that is listed in Schedule 2 or 3;

"blowdown water" means water that is discharged from a recirculating cooling water system or a boiler system for the purpose of controlling the level of water in the system or for the purpose of discharging from the system materials contained in the system the further build-up of which would impair the operation of the system;

"cooling water effluent" means water and associated material that is used in an industrial process for the purpose of removing heat and that has not, by design, come into contact with process materials, but does not include blowdown water;

"cooling water effluent monitoring stream" means a cooling water effluent stream on which a sampling point is established under section 8;

"cooling water effluent sampling point" means a sampling point established on a cooling water effluent stream under section 8;

"Director", in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger's plant is located and includes an alternate named by the Director;

"discharger" means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

"eight-hour period" means all or part of any period between,

(a) midnight and 8 a.m.,

(b) 8 a.m. and 4 p.m.,

(c) 4 p.m. and midnight;

"existing plant" means a plant that produced metal, metal concentrates or metal-bearing substances before this Regulation comes into force;

"limited parameter" means a parameter for which a limit is specified in Column 3 or 4 of Schedule 1;

"metal" means antimony, bismuth, cadmium, chromium, cobalt, copper, gold, iron, lead, manganese, mercury, molybdenum, niobium, nickel, palladium, platinum, silver, tantalum, tellurium, thorium, tin, titanium, tungsten, uranium, vanadium or zinc, or any combination thereof;

"metal mining plant" means any opening or excavation in, or working of, the ground for the purpose of winning any metal, metal concentrate or metal-bearing substance and includes all associated,

(a) ways, works, machinery, buildings or premises below or above the ground,

(b) waste disposal sites, wastewater treatment facilities, and

(c) roasting or smelting furnaces, refineries, concentrators or mills, wherever located, that are used in connection with washing, crushing, grinding, sifting, reducing, leaching, roasting, smelting, refining or treating of any metal, metal concentrate or metal-bearing substance;

"minewater effluent monitoring stream" means a process effluent monitoring stream,

(a) that flows from any opening or excavation in, or working of, the ground at the plant for the purpose of winning any metal, and

(b) that does not flow from a tailings area or other wastewater treatment facility associated with a tailings area;

"new plant" means a plant that begins production of metal, metal concentrates or metal-bearing substances on or after the day on which this Regulation comes into force;

"overflow effluent" means effluent discharged from a tailings area through a spillway or other engineered structure designed to protect the tailings area from failure in the event of an extraordinary thaw or storm event;

"overflow effluent monitoring stream" means an overflow effluent stream on which a sampling point is established under section 8;

"overflow effluent sampling point" means a sampling point established on an overflow effluent stream under section 8;

"pick-up", in relation to a sample, means pick-up for the purpose of storage, including storage within an automatic sampling device, and transportation to and analysis at a laboratory;

"process change" means a change in equipment, production processes, process materials or treatment processes;

"process effluent" means,

(a) effluent that, by design, has come into contact with process materials other than process materials stored in a materials storage site, including but not limited to a waste rock storage site or a slag storage site,

(b) blowdown water,

(c) effluent that results from cleaning or maintenance operations at a plant during a period when all or part of the plant is shut down, and

(d) any effluent described in clauses (a) to (c) combined with cooling water effluent or storm water effluent;

"process effluent monitoring stream" means a process effluent stream on which a sampling point is established under section 8;

"process effluent sampling point" means a sampling point established on a process effluent stream under section 8;

"process materials", in relation to a discharger's plant, means raw materials for use in an industrial process at the plant, manufacturing intermediates produced at the plant, or products or by-products of an industrial process at the plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

"quarter" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"Schedule 2 assessment parameter" means a parameter that is listed in Schedule 2;

"Schedule 3 assessment parameter" means a parameter that is listed in Schedule 3;

"semi-annual period" means all or part of a period of six months beginning on the first day of January or July;

"storm water effluent" means run-off from a storm event or thaw that is not used in any industrial process;

"tailings area" means an area that is confined by artificial or natural structures or both and that is used for the disposal of finely divided solid waste materials produced as a result of the processing of metal, metal concentrates or metal-bearing substances;

"wastewater treatment facility" includes a tailings area. O. Reg. 560/94, s. 1 (1); O. Reg. 169/96, s. 1.

(2) For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(3) An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger's behalf. O. Reg. 560/94, s. 1 (2, 3).

PURPOSE

2. The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants to which this Regulation applies. O. Reg. 560/94, s. 2.

APPLICATION

3. (1) This Regulation applies with respect to every plant that is a metal mining plant and that, on or after August 25, 1994, discharges a total volume of process effluent, cooling water effluent and overflow effluent of more than 50 cubic metres.

(2) Subject to subsection (4), this Regulation continues to apply to a plant described in subsection (1) even if,

(a) production at the plant is interrupted; or

(b) the total volume of process effluent, cooling water effluent and overflow effluent discharged from the plant is subsequently reduced to less than 50 cubic metres.

(3) Despite subsection (1), as of May 2, 1996 this Regulation does not apply to a plant that,

(a) ceased production permanently before August 26, 1994; or

(b) "closed out" as defined in subsection 139 (1) of the *Mining Act* before May 2, 1996.

(4) This Regulation ceases to apply to a plant described in subsection (1) on the day on which the plant begins "temporary suspension" as defined in subsection 139 (1) of the *Mining Act* and begins to apply to the plant again 30 days after production resumes.

(5) This Regulation ceases to apply to a plant described in subsection (1) 10 days after the day on which production at the plant ceases permanently.

(6) In the case of a planned permanent cessation, each discharger shall provide notice of the cessation to the Director before the cessation.

(7) A notice under subsection (6) shall include the date on which the discharger plans to cease production.

(8) In the case of an unplanned permanent cessation, each discharger shall provide notice of the cessation within 10 days of the cessation.

(9) A notice under subsection (8) shall include the date of the cessation.

(10) This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer or municipal storm sewer. O. Reg. 169/96, s. 2.

REQUIREMENTS UNDER APPROVALS, ORDERS, ETC.

4. For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 169/96, s. 2.

NON-APPLICATION OF GENERAL EFFLUENT MONITORING REGULATION

5. This Regulation is not a Sectoral Effluent Monitoring Regulation within the meaning of Ontario Regulation 695/88. O. Reg. 560/94, s. 5.

BY-PASSES

6. (1) Beginning on August 26, 1997, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger's plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 169/96, s. 3.

(2) A discharger shall not permit overflow effluent to be discharged from the discharger's plant unless it is unavoidable as a result of an extraordinary thaw or storm event. O. Reg. 560/94, s. 6 (2).

SAMPLING AND ANALYTICAL PROCEDURES — GENERAL

7. (1) Subject to section 21, each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(2) Each discharger shall maintain the sampling equipment used at the discharger's plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of each limited parameter and assessment parameter from the plant. O. Reg. 560/94, s. 7.

PART II
SAMPLING POINTS

ESTABLISHMENT AND ELIMINATION OF SAMPLING POINTS

8. (1) Each discharger shall establish, within the time requirements specified in subsections (7) and (8), a sampling point on each process effluent, cooling water effluent and overflow effluent stream at the discharger's plant, as necessary so that the plant loadings calculated under sections 12, 13 and 14 for each limited parameter and assessment parameter and the concentrations determined under sections 15, 16 and 17 for each limited parameter and assessment parameter accurately reflect the level of discharge of each such parameter from the plant.

(2) Despite subsection (1), a discharger need not establish a sampling point on a by-pass.

(3) If circumstances change so that a new sampling point is necessary at a discharger's plant in order to permit the calculation of plant loadings under sections 12, 13 and 14 for each limited parameter and assessment parameter and the determination of concentrations under sections 15, 16 and 17 for each limited parameter and assessment parameter that

accurately reflect the level of discharge of each such parameter from the plant, the discharger shall, within 30 days of the change, establish the new sampling point.

(4) A discharger may eliminate a sampling point established under subsection (1) or (3) if the sampling point is no longer necessary to permit the calculation of plant loadings under sections 12, 13 and 14 for each limited parameter and assessment parameter and the determination of concentrations under sections 15, 16 and 17 for each limited parameter and assessment parameter that accurately reflect the level of discharge of each such parameter from the plant.

(5) A plant loading for a parameter or a concentration for a parameter that is based on analytical results that are significantly affected by dilution or masking due to the merging of streams upstream of a sampling point at a plant is not a loading or a concentration that accurately reflects the level of discharge of the parameter from the plant.

(6) In determining what is necessary to meet a discharger's obligations to establish sampling points under this section, the discharger shall consider both which streams should have sampling points and where on a stream a sampling point should be located.

(7) Each discharger for an existing plant shall comply with subsection (1) within 90 days after the date on which this Regulation begins to apply to it.

(8) Each discharger for a new plant shall comply with subsection (1) before discharging a total volume of process effluent, cooling water effluent and overflow effluent of more than 50 cubic metres from the plant. O. Reg. 560/94, s. 8.

REPORTS ON SAMPLING POINTS

9. (1) Within 10 days after establishing sampling points under subsection 8 (1), the discharger shall submit to the Director a list and plot plan showing the sampling points.

(2) Within 30 days after establishing a sampling point under this Regulation that is not shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing the location of the sampling point, together with a revised list and plot plan showing the sampling point.

(3) Within 30 days after eliminating a sampling point under this Regulation that is shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point. O. Reg. 560/94, s. 9.

USE OF SAMPLING POINTS ESTABLISHED UNDER THIS PART

10. Subject to section 25, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 560/94, s. 10.

PART III
CALCULATION OF LOADINGS AND CONCENTRATIONS

CALCULATIONS UNDER THIS PART — GENERAL

11. (1) For the purposes of performing a calculation under sections 12 to 17, a discharger shall use the actual analytical result obtained by the laboratory.

(2) Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994, the discharger shall use the value zero for the purpose of performing a calculation under sections 12 to 17.

(3) Each discharger shall ensure that each calculation of a process effluent loading required by section 12 and each calculation of a process effluent concentration required by section 15 is performed as soon as reasonably possible after the analytical results on which the calculation is based become available to the discharger.

(4) Each discharger shall ensure that each calculation of a cooling water effluent loading required by section 13 is performed in time to comply with subsection 38 (4) and each calculation of a cooling water effluent concentration required by section 16 is performed in time to comply with subsection 38 (7).

(5) Each discharger shall ensure that each calculation of an overflow effluent loading required by section 14 is performed in time to comply with subsection 38 (5) and each calculation of an overflow effluent concentration required by section 17 is performed in time to comply with subsection 38 (8). O. Reg. 560/94, s. 11.

CALCULATION OF LOADINGS — PROCESS EFFLUENT

12. (1) Each discharger shall calculate, in kilograms, a daily process effluent stream loading for each limited parameter in each process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 31, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily process effluent plant loading for each limited parameter for each day for which the discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1), the daily process effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily process effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average process effluent plant loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average process effluent plant loading for a parameter for a month is the arithmetic mean of the daily process effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 560/94, s. 12.

CALCULATION OF LOADINGS — COOLING WATER EFFLUENT

13. (1) Each discharger shall calculate, in kilograms, a daily cooling water effluent stream loading for each Schedule 2 assessment parameter in each cooling water effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 31, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily cooling water effluent plant loading for each Schedule 2 assessment parameter for each day for which the discharger is required to calculate a daily cooling water effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily cooling water effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily cooling water effluent stream loading for a parameter for a day under subsection (1), the daily cooling water effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily cooling water effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average cooling water effluent plant loading for each Schedule 2 assessment parameter for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average cooling water effluent plant loading for a parameter for a month is the arithmetic mean of the daily cooling water effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 560/94, s. 13.

CALCULATION OF LOADINGS — OVERFLOW EFFLUENT

14. (1) Each discharger shall calculate, in kilograms, an overflow effluent stream loading for each Schedule 3 assessment parameter in each overflow effluent monitoring stream of the discharger for each eight-hour period during which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the volume of effluent, as determined under section 31, for the stream for the eight-hour period.

(3) Each discharger shall calculate, in kilograms, a daily overflow effluent stream loading for each Schedule 3 assessment parameter in each overflow effluent monitoring stream of the discharger for each day for which the discharger is required to calculate an overflow effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily overflow effluent stream loading for a parameter for a day is the sum, in kilograms, of all the eight-hour period overflow effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one overflow effluent stream loading for a parameter under subsection (1) for a stream for a day, the daily overflow effluent stream loading for the parameter for the day for the purposes of subsection (3) is the single overflow effluent stream loading calculated for the parameter under subsection (1). O. Reg. 560/94, s. 14.

CALCULATION OF CONCENTRATIONS — PROCESS EFFLUENT

15. (1) Each discharger shall calculate, in milligrams per litre, a monthly average concentration for each limited parameter in each process effluent monitoring stream of the discharger for each month.

(2) For the purposes of subsection (1), a monthly average concentration for a parameter for a month is the arithmetic mean of the analytical results obtained for the parameter from the samples collected under section 22 or 23, as the case may be, from the stream for the month. O. Reg. 560/94, s. 15.

CALCULATION OF CONCENTRATIONS — COOLING WATER EFFLUENT

16. (1) Each discharger shall calculate, in milligrams per litre, a monthly average concentration for each Schedule 2 assessment parameter in each cooling water effluent monitoring stream of the discharger for each month.

(2) For the purposes of subsection (1), a monthly average concentration for a parameter for a month is the arithmetic mean of the analytical results obtained for the parameter from the samples collected under section 29 from the stream for the month. O. Reg. 560/94, s. 16.

CALCULATION OF CONCENTRATIONS — OVERFLOW EFFLUENT

17. (1) Each discharger shall calculate, in milligrams per litre, a daily concentration for each Schedule 3 assessment parameter in each overflow effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) For the purposes of subsection (1), a daily concentration for a parameter for a stream for a day is the arithmetic mean of the analytical results obtained for the parameter from the samples collected under section 30 from the stream for the day.

(3) Where there is only one analytical result obtained for a parameter from the stream for a day, the daily concentration for the parameter for the stream for the day for the purposes of subsection (1) is the single analytical result obtained for the parameter. O. Reg. 560/94, s. 17.

PART IV
PARAMETER AND LETHALITY LIMITS

PARAMETER LIMITS

18. (1) Each discharger shall ensure that each analytical result obtained for each limited parameter from each sample collected from a process effluent monitoring stream at the discharger's plant does not exceed the daily concentration limit specified for the parameter in Column 3 of Schedule 1.

(2) Each discharger shall ensure that each monthly average concentration calculated for a limited parameter under section 15 in connection with the discharger's plant does not exceed the monthly average concentration limit specified for the parameter in Column 4 of Schedule 1.

(3) Subject to subsection (4), each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the pH value of any sample collected at a process effluent sampling point at the plant is within the range of 6.0 to 9.5.

(4) Throughout any day on which a discharger has used an alternate sampling point on a process effluent monitoring stream for sampling required by section 25, as permitted by subsections 25 (7) and (8), the discharger,

(a) shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

(b) need not comply with subsection (3) with respect to the stream. O. Reg. 560/94, s. 18.

LETHALITY LIMITS

19. Each discharger shall control the quality of each process effluent monitoring stream and each cooling water effluent monitoring stream at the discharger's plant to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a process effluent sampling point or cooling water effluent sampling point at the plant results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 560/94, s. 19.

PART V
MONITORING

MONITORING — GENERAL

20. (1) Despite sections 22 to 30, a discharger need not collect samples from any stream at the discharger's plant on a day on which process effluent is not being discharged from the plant. O. Reg. 560/94, s. 20 (1).

(2) Despite sections 22, 24 and 30, a discharger need not collect or analyze samples for total cyanide if cyanide is not used at the discharger's plant.

(3) Despite sections 22 and 24, a discharger need not collect or analyze samples for total cyanide from a minewater effluent monitoring stream. O. Reg. 169/96, s. 4.

(4) Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters, the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(5) A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(6) Subject to subsection (7), each discharger shall pick up all samples required to be picked up at the discharger's plant under sections 22, 23 and 29 between the hours of 7 a.m. and 10 a.m.

(7) If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger's plant are such that it would be impractical to pick up samples from each process effluent and cooling water effluent sampling point established at the plant under this Regulation within the time period specified in subsection (6), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (6).

(8) Subject to subsections (9) and (10), where a discharger is required by section 22, 23 or 29 to pick up samples, the discharger shall pick up samples collected over the 24-hour period immediately preceding the pick-up.

(9) The 24-hour period referred to in subsection (8) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (6) or of a different three-hour period specified in a notice under subsection (7).

(10) Where a notice has been given under subsection (7) in respect of a plant specifying a time period longer than three hours, the 24-hour period referred to in subsection (8) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(11) If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (7) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (7) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 560/94, s. 20 (4-11).

ALTERNATE SAMPLING PROCEDURES

21. (1) Where a discharger is, by virtue of subsection 7 (1), required by the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994, to collect a composite sample for any sample required to be picked up at a stream at the discharger's plant under this Regulation, the discharger may collect the composite sample by collecting three equal volume grab samples from the stream at intervals of at least two hours and combining them.

(2) A discharger who is required to collect a composite sample from a process effluent monitoring stream under section 22 or 23 may instead collect a single grab sample from the stream if,

(a) the process effluent monitoring stream flows from a tailings area or any other wastewater treatment facility associated with a tailings area and the retention time calculated under subsection (3) in relation to the stream is 30 days or more; or

(b) the process effluent monitoring stream does not flow from a tailings area or any other wastewater treatment facility associated with a tailings area and the retention time calculated under subsection (3) in relation to the stream is five days or more.

(3) Retention time in relation to a process effluent monitoring stream is the period of time in days that results from dividing the total available volume, expressed in cubic metres, of the wastewater treatment facilities on the stream by the average daily flow, expressed in cubic metres, of the stream.

(4) For the purposes of subsection (3), the total available volume of the wastewater treatment facilities on the process effluent monitoring stream is the volume of the wastewater treatment facilities that may be occupied by water on any day within the 90-day period preceding the date of the calculation of the retention time, taking into account,

(a) any requirements that apply in respect of the operation of those facilities in any Act or in any approval, order, direction or other instrument issued under any Act; and

(b) any solid waste or sludge contained within those facilities on the day of the calculation of the total available volume of those facilities.

(5) For the purposes of subsection (3), the average daily flow of the process effluent monitoring stream is the arithmetic mean of the 30 highest daily volumes calculated under section 31 in relation to the stream within the 90-day period preceding the date of the calculation of the retention time.

(6) The discharger of an existing plant to which Ontario Regulation 491/89 applies may include the days of flow calculated under section 5 of that Regulation in relation to the stream between August 26, 1994 and November 23, 1994 for the purposes of calculating the average daily flow of the process effluent monitoring stream.

(7) A discharger may sample at a process effluent monitoring stream in the manner described in subsection (2) for the period of time during which the retention time calculated in relation to the stream is in effect.

(8) A retention time calculated under this section expires 365 days after the date on which the calculation is made or on the date that a new retention time is calculated under this section, whichever date is sooner. O. Reg. 560/94, s. 21.

MONITORING — PROCESS EFFLUENT — THRICE WEEKLY

22. (1) Each discharger shall, on three days in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 1, is thrice weekly.

(2) There shall be an interval of at least 24 hours between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same three days in the week. O. Reg. 560/94, s. 22.

MONITORING — PROCESS EFFLUENT — WEEKLY

23. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 1, is weekly.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 560/94, s. 23.

MONITORING — PROCESS EFFLUENT — QUALITY CONTROL

24. (1) On one day in each year after 1994, on a day on which samples are picked up at the plant under subsection 22 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 22 (1) at one process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 1, is thrice weekly.

(2) On one day in each year after 1994, on a day on which samples are picked up at the plant under subsection 23 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 23 (1) at one process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 1, is weekly.

(3) Each discharger shall ensure that the same process effluent sampling point is used at the discharger's plant for the purposes of sampling under subsections (1) and (2) in a year.

(4) Each discharger shall prepare a travelling blank and travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) or (2) and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(5) There shall be an interval of at least six months between successive pick-up days at the plant under subsections (1) and (2). O. Reg. 560/94, s. 24.

MONITORING — PROCESS EFFLUENT — pH MEASUREMENT

25. (1) Each discharger shall, on three days in each week, during the time period applicable to the plant under subsection 20 (6) or (7), collect a grab sample from each process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(2) There shall be an interval of at least 24 hours between each of the three collections at a stream under subsection (1) in each week.

(3) All samples collected under this section shall be collected at the same time as samples collected under section 22.

(4) Each grab sample collected under subsection (1) shall be picked up within four hours of when it was collected.

(5) All samples picked up under subsection (1) in a week shall be picked up on the same three days in the week.

(6) Each discharger shall ensure that each grab sample picked up under subsection (1) is analyzed within four hours of when it is picked up.

(7) Instead of collecting a grab sample under subsection (1) from a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once on each of three days in each week during the time period applicable to the plant under subsection 20 (6) or (7).

(8) For the purposes of this section, a discharger shall use either the sampling point established under section 8 on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(9) Before using an alternate sampling point under subsection (8), a discharger shall give the Director a written notice describing the location of the alternate sampling point, together with a revised version of the list and plot plan submitted under section 9 showing the alternate sampling point. O. Reg. 560/94, s. 25.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

26. (1) Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", dated July, 1990.

(2) Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) On one day in each month, on a day on which samples are picked up at the plant under subsection 23 (1), each discharger shall collect and immediately pick up a grab sample at each process effluent sampling point at the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(4) There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(6) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(7) Samples picked up at a plant under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(8) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection 23 (1).

(9) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (6).

(10) All samples picked up under subsection (6) in a quarter shall be picked up on the same day in the quarter.

(11) If a rainbow trout acute lethality test performed under subsection (6) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (6) to (10) cease to apply in respect to samples from that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further 12 consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

(12) A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger's plant, within 30 days after the day on which the change begins. O. Reg. 560/94, s. 26 (1-12).

(13), (14) REVOKED: O. Reg. 560/94, s. 26 (15).

(15) SPENT: O. Reg. 560/94, s. 26 (15).

(16) Subsections (2) to (15) apply with necessary modifications to each cooling water effluent sampling point and, for the purpose, the reference in subsection (3) to each process effluent sampling point shall be deemed to be a reference to each cooling water effluent sampling point and the reference in subsections (3) and (8) to subsection 23 (1) shall be deemed to be a reference to subsection 29 (1). O. Reg. 560/94, s. 26 (16).

MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

27. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*", dated July, 1990. O. Reg. 560/94, s. 27 (1).

(2) Subsections 26 (2) to (16) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna*. O. Reg. 560/94, s. 27 (2); O. Reg. 169/96, s. 5.

(3) Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger's plant under this section on a day on which the discharger collects a sample from the sampling point under section 26, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 26. O. Reg. 560/94, s. 27 (3).

MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

28. (1) Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", dated February, 1992.

(2) Where a discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication

entitled "Biological Test Method: Test of Reproduction and Survival Using The Cladoceran *Ceriodaphnia dubia*", dated February, 1992.

(3) On one day in each semi-annual period, on a day on which samples are picked up at the plant under subsection 23 (1), each discharger shall collect and immediately pick up a grab sample from each process effluent sampling point at the discharger's plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

(4) There shall be an interval of at least 90 days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a semi-annual period shall be picked up on the same day in the semi-annual period.

(6) A discharger need not collect a sample from a sampling point in accordance with subsection (3) until 12 consecutive monthly rainbow trout acute lethality tests and 12 consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at a discharger's plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 560/94, s. 28.

MONITORING — COOLING WATER EFFLUENT — WEEKLY ASSESSMENT

29. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each cooling water effluent sampling point at the discharger's plant and shall analyze each set of samples for each Schedule 2 assessment parameter.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 560/94, s. 29.

MONITORING — OVERFLOW EFFLUENT — ASSESSMENT

30. (1) Each discharger shall, during each eight-hour period in which overflow effluent is discharged from the plant, collect a grab sample at each overflow effluent sampling point at the discharger's plant and shall analyze each sample for each Schedule 3 assessment parameter.

(2) Each grab sample collected under subsection (1) shall be picked up within four hours of when it was collected. O. Reg. 560/94, s. 30.

PART VI
EFFLUENT VOLUME

FLOW MEASUREMENT

31. (1) Subject to subsection (7), for the purposes of this section, a volume of effluent for a stream for a day is the volume that flowed past the sampling point established under Part II on the stream during the 24-hour period preceding the pick-up of the first sample picked up from the stream for the day.

(2) Each discharger shall determine in cubic metres a daily volume of effluent for each process effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(3) Each discharger shall use flow measurement methods that allow the daily volumes for process effluent streams to be determined to an accuracy of within plus or minus 15 per cent.

(4) Each discharger shall determine in cubic metres a daily volume of effluent for each cooling water effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(5) Each discharger shall use flow measurement methods that allow the daily volumes for cooling water effluent streams to be determined to an accuracy of within plus or minus 20 per cent.

(6) Each discharger shall determine in cubic metres a volume of effluent for each overflow effluent monitoring stream at the discharger's plant for each eight-hour period for which a sample is collected under this Regulation from the stream.

(7) For the purposes of subsection (6), a volume of effluent for an overflow effluent monitoring stream is the volume that flowed past the overflow effluent sampling point on the stream during the eight-hour period.

(8) Each discharger shall use flow measurement methods that allow the volumes for overflow effluent streams to be determined to an accuracy of within plus or minus 20 per cent.

(9) Each discharger shall, no later than the day that is 90 days after the date on which this Regulation begins to apply to the plant, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each flow measurement method used under subsection (2) meets the accuracy requirements of subsection (3), that each flow measurement method used under subsection (4) meets the accuracy requirements of subsection (5), and that each flow measurement method used under subsection (6) meets the accuracy requirements of subsection (8).

(10) Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the

Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsection (3), (5) or (8), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(11) Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger's plant and shall maintain each flow measurement system according to good operating practices.

(12) Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 560/94, s. 31.

CALCULATION OF PLANT VOLUMES

32. (1) Each discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

(2) For the purposes of subsection (1), a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under section 31 for the day.

(3) Each discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) for the month.

(4) Each discharger shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.

(5) For the purposes of subsection (4), a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under section 31 for the day.

(6) Each discharger shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection (4) for the month. O. Reg. 560/94, s. 32.

PART VII
STORM WATER CONTROL STUDY

STORM WATER CONTROL STUDY

33. (1) Each discharger shall complete a storm water control study in respect of the discharger's plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994.

(2) A discharger need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994; and

(b) the discharger notifies the Director in writing, within 12 months after the date on which this Regulation begins to apply to the plant, that the plant meets the exemption criteria referred to in clause (a).

(3) Subject to subsection (4), a discharger shall complete the storm water control study in respect of the discharger's plant within 24 months after the date on which this Regulation begins to apply to the plant.

(4) A discharger may postpone completion of the storm water control study in respect of the discharger's plant until 48 months after the date on which this Regulation begins to apply to the plant if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices, or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, within 24 months after the date on which this Regulation begins to apply to the plant, of the plans referred to in clause (a).

(5) Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 560/94, s. 33.

PART VIII
RECORDS AND REPORTS

RECORD KEEPING

34. (1) Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 22, 23, 25, 29 and 30, all calculations performed under sections 12, 13, 14, 15, 16 and 17 and all determinations and calculations made or performed under sections 31 and 32.

(2) Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 7, including, for each sample, the date, the time of pick-up, the sampling procedures used, and any incidents likely to affect the analytical results.

(3) Each discharger shall keep records of all retention times calculated under section 21.

(4) Each discharger shall keep records of the results of all monitoring performed under sections 24 and 26 to 30.

(5) Each discharger shall keep records of all maintenance and calibration procedures performed under section 31.

(6) Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction, and including a description of any remedial action taken.

(7) Each discharger shall keep records of any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged, stating the date, duration, cause and nature of each incident.

(8) Each discharger shall keep records of any incident in which overflow effluent is discharged from the discharger's plant stating the date, duration, cause and nature of each incident.

(9) Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger's plant.

(10) Each discharger shall keep records of the location of each sampling point established at the discharger's plant under Part II.

(11) Each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(12) Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 560/94, s. 34.

REPORTS AVAILABLE TO THE PUBLIC

35. (1) On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of plant loadings calculated under sections 12, 13 and 14;

(b) a summary of concentrations determined under sections 15, 16 and 17;

(c) a summary of retention times calculated under section 21;

(d) a summary of the results of monitoring performed under sections 22, 23 and 25 to 30;

(e) a summary of calculations performed under subsections 31 (6), 32 (1) and 32 (4);

(f) a summary of the concentrations or other results that exceeded a limit prescribed by section 18 or 19;

(g) a summary of the incidents in which process effluent was discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged; and

(h) a summary of the incidents in which overflow effluent was discharged from the discharger's plant.

(2) Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger's plant, on request during the plant's normal office hours.

(3) Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1). O. Reg. 560/94, s. 35.

REPORTS TO THE DIRECTOR — GENERAL

36. (1) Each discharger shall notify the Director in writing of any change of name or ownership of the discharger's plant occurring after this Regulation begins to apply to the plant, within 30 days after the end of the month in which the change occurs.

(2) Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger's plant, within 30 days of the change or redirection.

(3) A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week's duration. O. Reg. 560/94, s. 36.

REPORTS TO THE DIRECTOR ON COMPLIANCE WITH SECTION 6 AND PART IV

37. (1) Each discharger shall report any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged.

(2) Each discharger shall report any incident in which overflow effluent is discharged from the discharger's plant.

(3) Each discharger shall report any concentration or other result that exceeds a limit prescribed by section 18 or 19.

(4) A report required under subsection (1), (2) or (3) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 560/94, s. 37.

QUARTERLY REPORTS TO THE DIRECTOR

38. (1) No later than 45 days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger's plant throughout the quarter as required by subsections (3) to (13).

(2) A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format acceptable to the Director and signed by the discharger.

(3) A report under this section shall include all information included in a report given under section 37 during the quarter.

(4) Each discharger shall report, for each month in the quarter, the monthly average plant loadings and the highest and lowest daily plant loadings calculated under sections 12 and 13 for each limited parameter and each Schedule 2 assessment parameter.

(5) Each discharger shall report, for each day in the quarter, each daily overflow effluent stream loading calculated under section 14 for each Schedule 3 assessment parameter.

(6) Each discharger shall report, for each month in the quarter, the monthly average concentrations calculated under section 15 and the highest and lowest analytical results obtained under sections 22 and 23 for each limited parameter in each process effluent monitoring stream at the discharger's plant.

(7) Each discharger shall report, for each month in the quarter, the monthly average concentrations calculated under section 16 and the highest and lowest analytical results obtained under section 29 for each Schedule 2 assessment parameter in each cooling water effluent monitoring stream at the discharger's plant.

(8) Each discharger shall report, for each day in the quarter, the daily concentrations calculated under section 17 and the highest and lowest analytical results obtained under section 30 for each Schedule 3 assessment parameter in each overflow effluent monitoring stream at the discharger's plant.

(9) Each discharger shall report, for each month in the quarter, the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under section 32.

(10) Each discharger shall report, for each month in the quarter, the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under section 32.

(11) Each discharger shall report, for each day in the quarter, the daily overflow effluent stream volumes calculated under section 31.

(12) Each discharger shall report the number of days in each month in the quarter on which process effluent or overflow effluent was discharged from the discharger's plant.

(13) Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 25 for each process effluent monitoring stream at the discharger's plant. O. Reg. 560/94, s. 38.

REPORTS TO THE DIRECTOR ON CHRONIC TOXICITY TESTING

39. (1) Each discharger shall report to the Director the results of all monitoring performed under section 28, together with the date on which each sample was picked up, no later than 60 days after the end of each semi-annual period in which the monitoring was performed.

(2) A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 560/94, s. 39.

PART IX
COMPLIANCE

COMPLIANCE — EXISTING AND NEW PLANTS

40. (1) A discharger for an existing plant with respect to which this Regulation applies need not comply with,

(a) Part IV before August 26, 1997; and

(b) Parts V and VI before November 24, 1994. O. Reg. 560/94, s. 40.

(2) A discharger for a new plant with respect to which this Regulation applies need not comply with section 19 before August 26, 1997. O. Reg. 169/96, s. 6 (2).

41. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 560/94, s. 41.

SCHEDULE 1
PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

All Existing and New Plants				
ATG	Parameter	Monitoring Frequency	Daily Concentration Limit	Monthly Average Concentration Limit
			mg/L	mg/L
	Column 1	Column 2	Column 3	Column 4
2	Total Cyanide	3W	2	1
8	Total Suspended Solids (TSS)	3W	30	15
9	Copper	W	0.6	0.3
	Lead	W	0.4	0.2
	Nickel	W	1	0.5
	Zinc	W	1	0.5
10	Arsenic	W	1	0.5

Explanatory Notes:
3W = Thrice Weekly Monitoring Requirement
W = Weekly Monitoring Requirement
ATG = Analytical Test Group
mg/L = Milligrams Per Litre

O. Reg. 560/94, Sched. 1.

SCHEDULE 2
COOLING WATER EFFLUENT ASSESSMENT MONITORING

All Existing and New Plants		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
8	Total Suspended Solids (TSS)	W

Explanatory Notes:
W = Weekly Monitoring Requirement
ATG = Analytical Test Group

O. Reg. 560/94, Sched. 2.

SCHEDULE 3
OVERFLOW EFFLUENT ASSESSMENT MONITORING

All Existing and New Plants		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
2	Total Cyanide	8H
8	Total Suspended Solids (TSS)	8H
9	Copper	8H
	Lead	8H
	Nickel	8H
	Zinc	8H
10	Arsenic	8H

Explanatory Notes:
8H = Eight-Hour Period Monitoring Requirement
ATG = Analytical Test Group

O. Reg. 560/94, Sched. 3.

Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 561/94

Amended to O. Reg. 170/96

EFFLUENT MONITORING AND EFFLUENT LIMITS — INDUSTRIAL MINERALS SECTOR

Notice of Currency:* This document is up to date.

*This notice is usually current to within two business days of accessing this document. For more current amendment information, see the Table of Regulations (Legislative History).

This Regulation is made in English only.

PART I
GENERAL

INTERPRETATION

1. (1) In this Regulation,

"blowdown water" means water that is discharged from a recirculating cooling water system or a boiler system for the purpose of controlling the level of water in the system or for the purpose of discharging from the system materials contained in the system the further build-up of which would impair the operation of the system;

"cooling water effluent" means water and associated material that is used in an industrial process for the purpose of removing heat and that has not, by design, come into contact with process materials, but does not include blowdown water;

"cooling water effluent monitoring stream" means a cooling water effluent stream on which a sampling point is established under section 8;

"cooling water effluent sampling point" means a sampling point established on a cooling water effluent stream under section 8;

"Director", in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger's plant is located and includes an alternate named by the Director;

"discharger" means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

"industrial mineral" means graphite, gypsum, quartzite, salt, talc, nepheline syenite, trap rock, limestone, dolomite, sandstone or any combination thereof and includes portland clinker, cement, lime and magnesium;

"pick-up", in relation to a sample, means pick-up for the purpose of storage, including storage within an automatic sampling device, and transportation to and analysis at a laboratory;

"plant" means an industrial facility and the developed property, waste disposal sites and waste water treatment facilities associated with it;

"process change" means a change in equipment, production processes, process materials or treatment processes;

"process effluent" means,

(a) effluent that, by design, has come into contact with process materials other than process materials stored in a materials storage site, including but not limited to a rock salts storage site, a waste rock storage site or a slag storage site,

(b) blowdown water,

(c) effluent that results from cleaning or maintenance operations at a plant during a period when all or part of the plant is shut down, and

(d) any effluent described in clauses (a) to (c) combined with cooling water effluent or storm water effluent but does not include salt evaporator effluent;

"process effluent monitoring stream" means a process effluent stream on which a sampling point is established under section 8;

"process effluent sampling point" means a sampling point established on a process effluent stream under section 8;

"process materials", in relation to a discharger's plant, means raw materials for use in an industrial process at the plant, manufacturing intermediates produced at the plant, or products or by-products of an industrial process at the plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

"quarter" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"salt" means sodium chloride or halite;

"salt evaporator effluent" means water and associated material that is discharged from a salt evaporator plant;

"salt evaporator effluent monitoring stream" means a salt evaporator effluent stream on which a sampling point is established under section 8;

"salt evaporator effluent sampling point" means a sampling point established on a salt evaporator effluent stream under section 8;

"semi-annual period" means all or part of a period of six months beginning on the first day of January or July;

"storm water effluent" means run-off from a storm event or thaw that is not used in any industrial process;

"wastewater treatment facility" means a device or structure that is used to improve the quality of wastewater. O. Reg. 561/94, s. 1 (1); O. Reg. 170/96, s. 1.

(2) For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(3) An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger's behalf. O. Reg. 561/94, s. 1 (2, 3).

PURPOSE

2. The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants listed in Schedule 1. O. Reg. 561/94, s. 2.

APPLICATION

3. (1) This Regulation applies only with respect to the plants listed in Schedule 1. O. Reg. 561/94, s. 3 (1).

(2) This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer. O. Reg. 561/94, s. 3 (2); O. Reg. 170/96, s. 2.

APPLICATION

4. For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 170/96, s. 3.

NON-APPLICATION OF GENERAL EFFLUENT MONITORING REGULATION

5. This Regulation is not a Sectoral Effluent Monitoring Regulation within the meaning of Ontario Regulation 695/88. O. Reg. 561/94, s. 5.

BY-PASSES

6. Beginning on August 26, 1997, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger's plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 170/96, s. 4.

SAMPLING AND ANALYTICAL PROCEDURES — GENERAL

7. (1) Subject to section 21, each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(2) Each discharger shall maintain the sampling equipment used at the discharger's plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of total suspended solids from the plant. O. Reg. 561/94, s. 7.

PART II
SAMPLING POINTS

ESTABLISHMENT AND ELIMINATION OF SAMPLING POINTS

8. (1) Each discharger shall, by November 24, 1994, establish a sampling point on each process effluent, cooling water effluent, and salt evaporator effluent stream at the discharger's plant, as necessary so that the plant loadings calculated under sections 12, 13 and 14 for total suspended solids and the concentrations determined under sections 15, 16 and 17 of total suspended solids accurately reflect the level of discharge of total suspended solids from the plant.

(2) Despite subsection (1), a discharger need not establish a sampling point on a by-pass.

(3) If circumstances change so that a new sampling point is necessary at a discharger's plant in order to permit the calculation of plant loadings under sections 12, 13 and 14 for total suspended solids and the determination of concentrations under sections 15, 16 and 17 of total suspended solids that accurately reflect the level of discharge of total suspended solids from the plant, the discharger shall, within 30 days of the change, establish the new sampling point.

(4) A discharger may eliminate a sampling point established under subsection (1) or (3) if the sampling point is no longer necessary to permit the calculation of plant loadings under sections 12, 13 and 14 for total suspended solids and the determination of concentrations under sections 15, 16 and 17 of total suspended solids that accurately reflect the level of discharge of total suspended solids from the plant.

(5) For the purposes of this section, a plant loading for total suspended solids or a concentration of total suspended solids that is based on analytical results that are significantly affected by dilution or masking due to the merging of streams upstream of a sampling point at a plant is not a loading or a concentration that accurately reflects the level of discharge of total suspended solids from the plant.

(6) In determining what is necessary to meet a discharger's obligations to establish sampling points under this section, the discharger shall consider both which streams should have sampling points and where on a stream a sampling point should be located. O. Reg. 561/94, s. 8.

REPORTS ON SAMPLING POINTS

9. (1) By December 5, 1994, each discharger shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger's plant as of November 24, 1994.

(2) Within 30 days after establishing a sampling point under this Regulation that is not shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing the location of the sampling point, together with a revised list and plot plan showing the sampling point.

(3) Within 30 days after eliminating a sampling point under this Regulation that is shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point. O. Reg. 561/94, s. 9.

USE OF SAMPLING POINTS ESTABLISHED UNDER THIS PART

10. Subject to section 24, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 561/94, s. 10.

PART III
CALCULATION OF LOADINGS AND CONCENTRATIONS

CALCULATIONS UNDER THIS PART — GENERAL

11. (1) For the purposes of performing a calculation under sections 12 to 17, a discharger shall use the actual analytical result obtained by the laboratory.

(2) Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994, the discharger shall use the value zero for the purpose of performing a calculation under sections 12 to 17.

(3) Each discharger shall ensure that each calculation of a process effluent loading required by section 12 and each calculation of a process effluent concentration required by section 15 is performed as soon as reasonably possible after the analytical results on which the calculation is based become available to the discharger.

(4) Each discharger shall ensure that each calculation of a cooling water effluent loading required by section 13 is performed in time to comply with subsection 37 (4) and each calculation of a cooling water effluent concentration required by section 16 is performed in time to comply with subsection 37 (6). O. Reg. 561/94, s. 11.

CALCULATION OF LOADINGS — PROCESS EFFLUENT

12. (1) Each discharger shall calculate, in kilograms, a daily process effluent stream loading for total suspended solids in each process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for total suspended solids.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for total suspended solids by the daily volume of effluent, as determined under section 30, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily process effluent plant loading for total suspended solids for each day for which the discharger is required to calculate a daily process effluent stream loading for total suspended solids under subsection (1).

(4) For the purposes of subsection (3), a daily process effluent plant loading for total suspended solids for a day is the sum, in kilograms, of the daily process effluent stream loadings for total suspended solids calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily process effluent stream loading for total suspended solids for a day under subsection (1), the daily process effluent plant loading for total suspended solids for the day for the purposes of subsection (3) is the single daily process effluent stream loading for total suspended solids for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average process effluent plant loading for total suspended solids for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger's plant for analysis for total suspended solids.

(7) For the purposes of subsection (6), a monthly average process effluent plant loading for total suspended solids for a month is the arithmetic mean of the daily process effluent plant loadings for total suspended solids calculated under subsection (3) for the month. O. Reg. 561/94, s. 12.

CALCULATION OF LOADINGS — COOLING WATER EFFLUENT

13. (1) Each discharger shall calculate, in kilograms, a daily cooling water effluent stream loading for total suspended solids in each cooling water effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for total suspended solids.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for total suspended solids by the daily volume of effluent, as determined under section 30, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily cooling water effluent plant loading for total suspended solids for each day for which the discharger is required to calculate a daily cooling water effluent stream loading for total suspended solids under subsection (1).

(4) For the purposes of subsection (3), a daily cooling water effluent plant loading for total suspended solids for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for total suspended solids calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily cooling water effluent stream loading for total suspended solids for a day under subsection (1), the daily cooling water effluent plant loading for total suspended solids for the day for the purposes of subsection (3) is the single daily cooling water effluent stream loading for total suspended solids for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average cooling water effluent plant loading for total suspended solids for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger's plant for analysis for total suspended solids.

(7) For the purposes of subsection (6), a monthly average cooling water effluent plant loading for total suspended solids for a month is the arithmetic mean of the daily cooling water effluent plant loadings for total suspended solids calculated under subsection (3) for the month. O. Reg. 561/94, s. 13.

CALCULATION OF LOADINGS — SALT EVAPORATOR EFFLUENT

14. (1) Each discharger shall calculate, in kilograms, a daily salt evaporator effluent stream loading for total suspended solids in each salt evaporator effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for total suspended solids.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for total suspended solids by the daily volume of effluent, as determined under section 30, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily salt evaporator effluent plant loading for total suspended solids for each day for which the discharger is required to calculate a daily salt evaporator effluent stream loading for total suspended solids under subsection (1).

(4) For the purposes of subsection (3), a daily salt evaporator effluent plant loading for total suspended solids for a day is the sum, in kilograms, of the daily salt evaporator effluent stream loadings for total suspended solids calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily salt evaporator effluent stream loading for total suspended solids for a day under subsection (1), the daily salt evaporator effluent plant loading for total suspended solids for the day for the purposes of subsection (3) is the single daily salt evaporator effluent stream loading for total suspended solids for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average salt evaporator effluent plant loading for total suspended solids for each month in which a sample is collected under this Regulation more than once from a salt evaporator effluent monitoring stream at the discharger's plant for analysis for total suspended solids.

(7) For the purposes of subsection (6), a monthly average salt evaporator effluent plant loading for total suspended solids for a month is the arithmetic mean of the daily salt evaporator effluent plant loadings for total suspended solids calculated under subsection (3) for the month. O. Reg. 561/94, s. 14.

CALCULATION OF CONCENTRATIONS — PROCESS EFFLUENT

15. (1) Each discharger shall calculate, in milligrams per litre, a monthly average concentration for total suspended solids in each process effluent monitoring stream of the discharger for each month.

(2) For the purposes of subsection (1), a monthly average concentration for total suspended solids for a month is the arithmetic mean of the analytical results obtained for total suspended solids from the samples collected under section 22 from the stream for the month.

(3) Where there is only one analytical result obtained for total suspended solids from the stream for a day, the daily concentration for total suspended solids for the stream for the day for the purposes of subsection (1) is the single analytical result obtained for total suspended solids. O. Reg. 561/94, s. 15.

CALCULATION OF CONCENTRATIONS — COOLING WATER EFFLUENT

16. (1) Each discharger shall calculate, in milligrams per litre, a monthly average concentration for total suspended solids in each cooling water effluent monitoring stream of the discharger for each month.

(2) For the purposes of subsection (1), a monthly average concentration for total suspended solids for a month is the arithmetic mean of the analytical results obtained for total suspended solids from the samples collected under section 28 from the stream for the month. O. Reg. 561/94, s. 16.

CALCULATION OF CONCENTRATIONS — SALT EVAPORATOR EFFLUENT

17. (1) Each discharger shall calculate, in milligrams per litre, a monthly average concentration for total suspended solids in each salt evaporator effluent monitoring stream of the discharger for each month in which a sample is collected under this Regulation from the stream for analysis for total suspended solids.

(2) For the purposes of subsection (1), a monthly average concentration for total suspended solids for a month is the arithmetic mean of the analytical results obtained for total suspended solids from the samples collected under section 29 from the stream for the month. O. Reg. 561/94, s. 17.

PART IV
PARAMETER AND LETHALITY LIMITS

PARAMETER LIMITS

18. (1) Each discharger shall ensure that each analytical result obtained for total suspended solids under section 22 from each sample collected from a process effluent monitoring stream at the discharger's plant does not exceed 50 milligrams per litre.

(2) Each discharger shall ensure that each monthly average concentration calculated for total suspended solids under section 15 in connection with the discharger's plant does not exceed 25 milligrams per litre.

(3) Subject to subsection (4), each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the pH value of any sample collected at a process effluent sampling point at the plant is within the range of 6.0 to 9.5.

(4) Throughout any day on which a discharger has used an alternate sampling point on a process effluent monitoring stream for sampling required by section 24, as permitted by subsections 24 (5) and (6), the discharger,

(a) shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

(b) need not comply with subsection (3) with respect to the stream. O. Reg. 561/94, s. 18.

LETHALITY LIMITS

19. Each discharger shall control the quality of each process effluent monitoring stream and each cooling water effluent monitoring stream at the discharger's plant to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a process effluent sampling point or cooling water effluent sampling point at the plant results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 561/94, s. 19.

PART V
MONITORING

MONITORING — GENERAL

20. (1) Despite sections 22 to 29, a discharger need not collect samples from any process effluent or cooling water effluent or salt evaporator effluent monitoring stream at the discharger's plant on a day on which process effluent or salt evaporator effluent is not being discharged from the plant.

(2) Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters, the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(3) A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(4) Subject to subsection (7), each discharger shall pick up all samples required to be picked up at the discharger's plant under sections 22, 28 and 29 between the hours of 7 a.m. and 10. a.m.

(5) If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger's plant are such that it would be impractical to pick up samples from each process effluent, cooling water effluent and salt evaporator effluent sampling point established at the plant under this Regulation within the time period specified in subsection (4), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (4).

(6) Subject to subsections (7) and (8), where a discharger is required by sections 22, 28 and 29 to pick up samples, the discharger shall pick up samples collected over the 24-hour period immediately preceding the pick-up.

(7) The 24-hour period referred to in subsection (6) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (4) or of a different three-hour period specified in a notice under subsection (5).

(8) Where a notice has been given under subsection (5) in respect of a plant specifying a time period longer than three hours, the 24-hour period referred to in subsection (6) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(9) If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (5) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (5) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 561/94, s. 20.

(10) Sections 22 to 29 do not apply in relation to the Unimin Canada Ltd., Badgeley Island plant for any period during which,

(a) production at the plant is interrupted; and

(b) the employees and agents of the discharger are absent from Badgeley Island.

(11) Each discharger for the Unimin Canada Ltd., Badgeley Island plant shall provide written notice to the Director no later than 14 days before each of the following:

1. Any date on which the discharger plans to interrupt production at the plant to the extent that employees and agents of the plant will not be required on Badgeley Island.
2. Any date on which the discharger plans to restart production at the plant, to the extent that employees and agents of the plant will be required to be present on Badgeley Island. O. Reg. 170/96, s. 5.

ALTERNATE SAMPLING PROCEDURES

21. (1) Where a discharger is, by virtue of subsection 7 (1), required by the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994, to collect a composite sample for any sample required to be picked up at a stream at the discharger's plant under this Regulation, the discharger may collect the composite sample by collecting three equal volume grab samples from the stream at intervals of at least two hours and combining them.

(2) A discharger who is required to collect a composite sample from a process effluent monitoring stream under section 22 may instead collect a single grab sample from the stream if the process effluent monitoring stream flows from a wastewater treatment facility and the retention time calculated under subsection (3) in relation to the stream is two days or more.

(3) A retention time in relation to a process effluent monitoring stream is the period of time in days that results from dividing the total available volume, expressed in cubic metres, of the wastewater treatment facilities on the stream by the average daily flow, expressed in cubic metres, of the stream.

(4) For the purposes of subsection (3), the total available volume of the wastewater treatment facilities on the process effluent monitoring stream is the volume of the wastewater treatment facilities that may be occupied by water on any day within the 90-day period preceding the date of the calculation of the retention time, taking into account,

(a) any requirements that apply in respect of the operation of those facilities in any Act or in any approval, order, direction or other instrument issued under any Act; and

(b) any solid waste or sludge contained within those facilities on the day of the calculation of the total available volume of those facilities.

(5) For the purposes of subsection (3), the average daily flow of the process effluent monitoring stream is the arithmetic mean of the 30 highest daily volumes calculated under section 30 in relation to the stream within the 90-day period preceding the date of the calculation of the retention time.

(6) The discharger of a plant to which Ontario Regulation 91/90 applies may include the days of flow calculated under section 5 of that Regulation in relation to the stream between August 26, 1994 and November 23, 1994 for the purposes of calculating the average daily flow of the process effluent monitoring stream.

(7) A discharger may sample at a process effluent monitoring stream in the manner described in subsection (2) for the period of time during which the retention time calculated in relation to the stream is in effect.

(8) A retention time calculated under this section expires 365 days after the date on which the calculation is made or on the date that a new retention time is calculated under this section, whichever date is sooner. O. Reg. 561/94, s. 21.

MONITORING — PROCESS EFFLUENT — WEEKLY

22. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for total suspended solids.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 561/94, s. 22.

MONITORING — PROCESS EFFLUENT — QUALITY CONTROL

23. (1) On one day in each year after 1994, on a day on which samples are picked up at the plant under subsection 22 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 22 (1) at one process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for total suspended solids.

(2) There shall be an interval of at least six months between successive pick-up days at the plant under subsection (1). O. Reg. 561/94, s. 23.

MONITORING — PROCESS EFFLUENT — pH MEASUREMENT

24. (1) Each discharger shall, on one day in each week, during the time period applicable to the plant under subsection 20 (4) or (5), collect a grab sample from each process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(2) There shall be an interval of at least four days between each of the collections at a stream under subsection (1) in each week.

(3) All samples collected under this section shall be collected at the same time as samples collected under section 22. O. Reg. 561/94, s. 24 (1-3).

(4) REVOKED: O. Reg. 170/96, s. 6.

(5) Instead of collecting a grab sample under subsection (1) from a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each week during the time period applicable to the plant under subsection 20 (4) or (5).

(6) For the purposes of this section, a discharger shall use either the sampling point established under section 8 on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(7) Before using an alternate sampling point under subsection (6), a discharger shall give the Director a written notice describing the location of the alternate sampling point, together with a revised version of the list and plot plan submitted under section 9 showing the alternate sampling point. O. Reg. 561/94, s. 24 (5-7).

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

25. (1) Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", dated July, 1990.

(2) Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) On one day in each month, on a day on which samples are picked up at the plant under subsection 22 (1), each discharger shall collect and immediately pick up a grab sample at each process effluent sampling point at the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(4) There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(6) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(7) Samples picked up at a plant under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(8) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection 22 (1).

(9) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (6).

(10) All samples picked up under subsection (6) in a quarter shall be picked up on the same day in the quarter.

(11) If a rainbow trout acute lethality test performed under subsection (6) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (6) to (10) cease to apply in respect to samples from that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further 12 consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

(12) A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger's plant, within 30 days after the day on which the change begins. O. Reg. 561/94, s. 25 (1-12).

(13), (14) REVOKED: O. Reg. 561/94, s. 25 (15).

(15) SPENT: O. Reg. 561/94, s. 25 (15).

(16) Subsections (2) to (15) apply with necessary modifications to each cooling water effluent sampling point and, for the purpose, the reference in subsection (3) to each process effluent sampling point shall be deemed to be a reference to each cooling water effluent sampling point and the reference in subsections (3) and (8) to subsection 22 (1) shall be deemed to be a reference to subsection 28 (1). O. Reg. 561/94, s. 25 (16).

MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

26. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*", dated July, 1990. O. Reg. 561/94, s. 26 (1).

(2) Subsections 25 (2) to (16) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna*. O. Reg. 561/94, s. 26 (2); O. Reg. 170/96, s. 7.

(3) Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger's plant under this section on a day on which the discharger collects a sample from the sampling point under section 25, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 25. O. Reg. 561/94, s. 26 (3).

MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

27. (1) Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", dated February, 1992.

(2) Where a discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication

entitled "Biological Test Method: Test of Reproduction and Survival Using The Cladoceran *Ceriodaphnia dubia*", dated February, 1992.

(3) On one day in each semi-annual period, on a day on which samples are picked up at the plant under subsection 22 (1), each discharger shall collect and immediately pick up a grab sample from each process effluent sampling point at the discharger's plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

(4) There shall be an interval of at least 90 days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a semi-annual period shall be picked up on the same day in the semi-annual period.

(6) A discharger need not collect a sample from a sampling point in accordance with subsection (3) until 12 consecutive monthly rainbow trout acute lethality tests and 12 consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at a discharger's plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 561/94, s. 27.

MONITORING — COOLING WATER EFFLUENT — WEEKLY ASSESSMENT

28. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each cooling water effluent sampling point at the discharger's plant and shall analyze each set of samples for total suspended solids.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 561/94, s. 28.

MONITORING — SALT EVAPORATOR EFFLUENT — WEEKLY ASSESSMENT

29. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each salt evaporator effluent sampling point at the discharger's plant and shall analyze each set of samples for total suspended solids.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 561/94, s. 29.

PART VI
EFFLUENT VOLUME

FLOW MEASUREMENT

30. (1) For the purposes of this section, a volume of effluent for a stream for a day is the volume that flowed past the sampling point established under Part II on the stream during the 24-hour period preceding the pick-up of the first sample picked up from the stream for the day.

(2) Each discharger shall determine in cubic metres a daily volume of effluent for each process effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(3) Each discharger shall use flow measurement methods that allow the daily volumes for process effluent streams to be determined to an accuracy of within plus or minus 15 per cent.

(4) Each discharger shall determine in cubic metres a daily volume of effluent for each cooling water effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(5) Each discharger shall use flow measurement methods that allow the daily volumes for cooling water effluent streams to be determined to an accuracy of within plus or minus 20 per cent.

(6) Each discharger shall determine in cubic metres a volume of effluent for each salt evaporator effluent monitoring stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(7) Each discharger shall use flow measurement methods that allow the daily volumes for salt evaporator effluent streams to be determined to an accuracy of within plus or minus 20 per cent.

(8) Each discharger shall, no later than the day on which this section comes into force, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each flow measurement method used under subsection (2) meets the accuracy requirements of subsection (3), that each flow measurement method used under subsection (4) meets the accuracy requirements of subsection (5), and that each flow measurement method used under subsection (6) meets the accuracy requirements of subsection (7).

(9) Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsection (3), (5) or (7), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(10) Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger's plant and shall maintain each flow measurement system according to good operating practices.

(11) Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 561/94, s. 30.

CALCULATION OF PLANT VOLUMES

31. (1) Each discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

(2) For the purposes of subsection (1), a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under section 30 for the day.

(3) Each discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) for the month.

(4) Each discharger shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.

(5) For the purposes of subsection (4), a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under section 30 for the day.

(6) Each discharger shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection (4) for the month.

(7) Each discharger shall calculate, in cubic metres, a daily salt evaporator effluent plant volume for each day.

(8) For the purposes of subsection (7), a salt evaporator effluent volume for a day is the sum of the daily salt evaporator effluent volumes determined under section 30 for the day.

(9) Each discharger shall calculate, in cubic metres, a monthly average salt evaporator effluent plant volume for each month, by taking the arithmetic mean of the daily salt evaporator effluent plant volumes calculated under subsection (7) for the month. O. Reg. 561/94, s. 31.

PART VII
STORM WATER CONTROL STUDY

32. (1) Each discharger shall complete a storm water control study in respect of the discharger's plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994.

(2) A discharger need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994; and

(b) the discharger notifies the Director in writing, by August 28, 1995, that the plant meets the exemption criteria referred to in clause (a).

(3) Subject to subsection (4), a discharger shall complete the storm water control study in respect of the discharger's plant by August 26, 1996.

(4) A discharger may postpone completion of the storm water control study in respect of the discharger's plant until August 26, 1998 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices, or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, by August 26, 1996, of the plans referred to in clause (a).

(5) Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 561/94, s. 32.

PART VIII
RECORDS AND REPORTS

RECORD KEEPING

33. (1) Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 22, 24, 28 and 29, all calculations performed under sections 12, 13, 14, 15, 16 and 17 and all determinations and calculations made or performed under sections 30 and 31.

(2) Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 7, including, for each sample, the date, the time of pick-up, the sampling procedures used, and any incidents likely to affect the analytical results.

(3) Each discharger shall keep records of all retention times calculated under section 21.

(4) Each discharger shall keep records of the results of all monitoring performed under sections 23 and 25 to 29.

(5) Each discharger shall keep records of all maintenance and calibration procedures performed under section 30.

(6) Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction, and including a description of any remedial action taken.

(7) Each discharger shall keep records of any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged, stating the date, duration, cause and nature of each incident.

(8) Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger's plant.

(9) Each discharger shall keep records of the location of each sampling point established at the discharger's plant under Part II.

(10) Each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(11) Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 561/94, s. 33.

REPORTS AVAILABLE TO THE PUBLIC

34. (1) On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of plant loadings calculated under sections 12, 13 and 14;

(b) a summary of concentrations determined under sections 15, 16 and 17;

(c) a summary of retention times calculated under section 21;

(d) a summary of the results of monitoring performed under sections 22 and 24 to 29;

(e) a summary of calculations performed under subsections 30 (2), (4), (6), 31 (1), (4) and (7);

(f) a summary of the concentrations or other results that exceeded a limit prescribed by section 18 or 19; and

(g) a summary of the incidents in which process effluent was discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged.

(2) Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger's plant, on request during the plant's normal office hours.

(3) Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1). O. Reg. 561/94, s. 34.

REPORTS TO THE DIRECTOR — GENERAL

35. (1) Each discharger shall notify the Director in writing of any change of name or ownership of the discharger's plant occurring after August 26, 1994, within 30 days after the end of the month in which the change occurs.

(2) Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger's plant, within 30 days of the change or redirection.

(3) A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week's duration. O. Reg. 561/94, s. 35.

REPORTS TO THE DIRECTOR ON COMPLIANCE WITH SECTION 6 AND PART IV

36. (1) Each discharger shall report any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged.

(2) Each discharger shall report any concentration or other result that exceeds a limit prescribed by section 18 or 19.

(3) A report required under subsection (1) or (2) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 561/94, s. 36.

QUARTERLY REPORTS TO THE DIRECTOR

37. (1) No later than 45 days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger's plant throughout the quarter as required by subsections (3) to (12).

(2) A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format acceptable to the Director and signed by the discharger.

(3) A report under this section shall include all information included in a report given under section 36 during the quarter.

(4) Each discharger shall report, for each month in the quarter, the monthly average plant loadings and the highest and lowest daily plant loadings calculated under sections 12, 13 and 14 for total suspended solids.

(5) Each discharger shall report, for each month in the quarter, the monthly average concentrations calculated under section 15 and the highest and lowest analytical results obtained under section 22 for total suspended solids in each process effluent monitoring stream at the discharger's plant.

(6) Each discharger shall report, for each month in the quarter, the monthly average concentrations calculated under section 16 and the highest and lowest analytical results obtained under section 28 for total suspended solids in each cooling water effluent monitoring stream at the discharger's plant.

(7) Each discharger shall report, for each month in the quarter, the monthly average concentrations calculated under section 17 and the highest and lowest analytical results obtained under section 29 for total suspended solids in each salt evaporator effluent monitoring stream at the discharger's plant.

(8) Each discharger shall report, for each month in the quarter, the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under section 31.

(9) Each discharger shall report, for each month in the quarter, the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under section 31.

(10) Each discharger shall report, for each month in the quarter, the monthly average salt evaporator effluent plant volume and the highest and lowest daily salt evaporator effluent plant volumes calculated under section 31.

(11) Each discharger shall report the number of days in each month in the quarter on which process effluent, cooling water effluent, or salt evaporator effluent was discharged from the discharger's plant.

(12) Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 24 for each process effluent monitoring stream at the discharger's plant. O. Reg. 561/94, s. 37.

REPORTS TO THE DIRECTOR ON CHRONIC TOXICITY TESTING

38. (1) Each discharger shall report to the Director the results of all monitoring performed under section 27, together with the date on which each sample was picked up, no later than 60 days after the end of each semi-annual period in which the monitoring was performed.

(2) A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 561/94, s. 38.

39. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 561/94, s. 39.

40. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 561/94, s. 40.

SCHEDULE 1
REGULATED PLANTS

Plant	Location	Product
Essroc Canada Inc.	Picton	Cement
Lafarge Canada Inc.	Bath	Cement
Lafarge Canada Inc.	Woodstock	Cement
St. Lawrence Cement Inc.	Mississauga	Cement
St. Marys Cement Corporation	Bowmanville	Cement
St. Marys Cement Corporation	St. Marys	Cement
Beachvilime Limited East Plant	Beachville	Lime
Beachvilime Limited West Plant	Beachville	Lime
Beachvilime Limited (Guelph Dolime Limited)	Guelph	Lime
Redland Quarries Inc. (Processing Area and South Quarry only)	Dundas	Lime
Global Stone (Ingersoll) Ltd.	Ingersoll	Lime
Timminco Limited	Haley	Magnesium

Applied Carbon Technology, Inc.	Kearney	Graphite
Canada Talc Limited	Madoc	Talc
Luzenac Inc.	Timmins	Talc
CGC Inc.	Hagersville	Gypsum
Domtar Inc.	Caledonia	Gypsum
Westroc Industries Limited	Drumbo	Gypsum
Unimin Canada Ltd.	Nephton	Nepheline Syenite
Unimin Canada Ltd.	Blue Mountain	Nepheline Syenite
Unimin Canada Ltd.	Badgeley Island	Quartzite
3M Canada Inc.	Havelock	Trap rock
Sifto Canada Inc. Goderich Mine	Goderich	Salt
Sifto Canada Inc. Evaporator Plant	Goderich	Salt
The Canadian Salt Company Limited Ojibway Mine	Windsor	Salt
The Canadian Salt Company Limited Evaporator Plant	Windsor	Salt

O. Reg. 561/94, Sched. 1.

Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 562/94

Amended to O. Reg. 526/95

EFFLUENT MONITORING AND EFFLUENT LIMITS — METAL CASTING SECTOR

Notice of Currency:* This document is up to date.

*This notice is usually current to within two business days of accessing this document. For more current amendment information, see the Table of Regulations (Legislative History).

This Regulation is made in English only.

PART I
GENERAL

INTERPRETATION

1. (1) In this Regulation,

"assessment parameter" means a parameter that is listed in Schedule 3;

"blowdown water" means recirculating water that is discharged from a cooling water system for the purpose of controlling the level of water in the cooling water system or for the purpose of discharging from the cooling water system materials contained in the cooling water system the further build-up of which would impair the operation of the system;

"cooling water effluent" means water and associated material that is used in an industrial process for the purpose of removing heat and that has not, by design, come into contact with process materials, but does not include blowdown water;

"cooling water effluent monitoring stream" means a cooling water effluent stream on which a sampling point is established under section 8;

"cooling water effluent sampling point" means a sampling point established on a cooling water effluent stream under section 8;

"Director", in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger's plant is located and includes an alternate named by the Director;

"discharger" means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

"limited parameter", in relation to a plant, means a parameter for which a limit is specified for the plant in Column 3 or 4 of Schedule 2;

"pick-up", in relation to a sample, means pick-up for the purposes of storage, including storage within an automatic sampling device, and transportation to and analysis at a laboratory;

"plant" means an industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;

"process change" means a change in equipment, production processes, process materials or treatment processes;

"process effluent" means,

(a) effluent that, by design, has come into contact with process materials,

(b) blowdown water,

(c) effluent that results from cleaning or maintenance operations at a plant during a period when all or part of the plant is shut down, and

(d) any effluent described in clauses (a) to (c) combined with cooling water effluent or storm water effluent;

"process effluent monitoring stream" means a process effluent stream on which a sampling point is established under section 8;

"process effluent sampling point" means a sampling point established on a process effluent stream under section 8;

"process materials", in relation to a discharger's plant, means raw materials for use in an industrial process at the plant, manufacturing intermediates produced at the plant, or products or by-products of an industrial process at the plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

"quarter" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"semi-annual period" means all or part of a period of six months beginning on the first day of January or July;

"storm water effluent" means run-off from a storm event or thaw that is not used in any industrial process.

(2) For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(3) An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger's behalf. O. Reg. 562/94, s. 1.

PURPOSE

2. The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants listed in Schedule 1. O. Reg. 562/94, s. 2.

APPLICATION

3. (1) This Regulation applies only with respect to the plants listed in Schedule 1. O. Reg. 562/94, s. 3 (1).

(2) This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer. O. Reg. 562/94, s. 3 (2); O. Reg. 526/95, s. 1.

OBLIGATIONS UNDER APPROVALS, ORDERS, ETC.

4. For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 526/95, s. 2.

NON-APPLICATION OF GENERAL EFFLUENT MONITORING REGULATION

5. This Regulation is not a Sectoral Effluent Monitoring Regulation within the meaning of Ontario Regulation 695/88. O. Reg. 562/94, s. 5.

BY-PASSES

6. Beginning on August 26, 1997, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger's plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 526/95, s. 3.

SAMPLING AND ANALYTICAL PROCEDURES

7. (1) Each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(2) Each discharger shall maintain the sampling equipment used at the discharger's plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of each limited parameter and assessment parameter from the plant. O. Reg. 562/94, s. 7.

PART II
SAMPLING POINTS

ESTABLISHMENT AND ELIMINATION OF SAMPLING POINTS

8. (1) Each discharger shall, by November 24, 1994, establish a sampling point on each process effluent and cooling water effluent stream at the discharger's plant, as necessary so that the plant loadings calculated under sections 12 and 14 for each limited parameter and assessment parameter, accurately reflect the level of discharge of each such parameter from the plant.

(2) Despite subsection (1), a discharger need not establish a sampling point on a by-pass.

(3) If circumstances change so that a new sampling point is necessary at a discharger's plant in order to permit the calculation of plant loadings under sections 12 and 14 for each limited parameter and assessment parameter that accurately reflect the level of discharge of each such parameter from the plant, the discharger shall, within 30 days of the change, establish the new sampling point.

(4) A discharger may eliminate a sampling point established under subsection (1) or (3) if the sampling point is no longer necessary to permit the calculation of plant loadings under sections 12 and 14 for each limited parameter and assessment parameter that accurately reflect the level of discharge of each such parameter from the plant.

(5) For the purposes of this section, a plant loading for a parameter that is based on analytical results that are significantly affected by dilution or masking due to the merging of streams upstream of a sampling point at a plant is not a loading that accurately reflects the level of discharge of the parameter from the plant.

(6) In determining what is necessary to meet a discharger's obligations to establish sampling points under this section, the discharger shall consider both which streams should have sampling points and where on a stream a sampling point should be located. O. Reg. 562/94, s. 8.

REPORTS ON SAMPLING POINTS

9. (1) By December 5, 1994, each discharger shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger's plant as of November 24, 1994.

(2) Within 30 days after establishing a sampling point under this Regulation that is not shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing the location of the sampling point, together with a revised list and plot plan showing the sampling point.

(3) Within 30 days after eliminating a sampling point under this Regulation that is shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point. O. Reg. 562/94, s. 9.

USE OF SAMPLING POINTS ESTABLISHED UNDER THIS PART

10. Except as permitted or required under sections 20, 22, 23 and 24, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 562/94, s. 10.

PART III
CALCULATION OF LOADINGS

CALCULATION OF LOADINGS — GENERAL

11. (1) For the purposes of performing a calculation under sections 12, 13 and 14 a discharger shall use the actual analytical result obtained by the laboratory.

(2) Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994, the discharger shall use the value zero for the purpose of performing a calculation under sections 12, 13 and 14.

(3) Each discharger shall ensure that each calculation of a process effluent loading required by sections 12 and 13 is performed as soon as reasonably possible after the analytical result on which the calculation is based becomes available to the discharger.

(4) Each discharger shall ensure that each calculation of a cooling water effluent loading required by section 14 is performed in time to comply with subsection 35 (4). O. Reg. 562/94, s. 11.

CALCULATION OF LOADINGS — PROCESS EFFLUENT

12. (1) Each discharger shall calculate, in kilograms, a daily process effluent stream loading for each limited parameter in each process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the sampling point established under section 8 on the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 27, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily process effluent plant loading for each limited parameter for each day for which the discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1), the daily process effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily process effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average process effluent plant loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average process effluent plant loading for a parameter for a month is the arithmetic mean of the daily process effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 562/94, s. 12.

CALCULATION OF LOADINGS AT ALTERNATE SAMPLING POINTS USED UNDER SECTION 23

13. (1) In addition to complying with section 12, each discharger shall calculate, in kilograms, a daily alternate loading for each parameter listed in subsection 20 (1) in each stream for which the discharger uses an alternate sampling point under section 23, for each day on which a sample is collected under this Regulation from the alternate sampling point on the stream for analysis for the parameter.

(2) When calculating a daily alternate loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily alternate volume of effluent, as determined under section 28, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a monthly average alternate loading for each parameter listed in subsection 20 (1) in each stream for which the discharger uses an alternate sampling point under section 23, for each month in which a sample is collected under this Regulation from the alternate sampling point on the stream for analysis for the parameter.

(4) For the purposes of subsection (3), a monthly average alternate loading for a parameter in a stream for a month is the arithmetic mean of the daily alternate loadings for the parameter in the stream calculated under subsection (1) for the month. O. Reg. 562/94, s. 13.

CALCULATION OF LOADINGS — COOLING WATER

14. (1) Each discharger shall calculate, in kilograms, a daily cooling water effluent stream loading for each assessment parameter in each cooling water effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 27, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily cooling water effluent plant loading for each assessment parameter for each day for which the discharger is required to calculate a daily cooling water effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily cooling water effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily cooling water effluent stream loading for a parameter for a day under subsection (1), the daily cooling water effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily cooling water effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average cooling water effluent plant loading for each assessment parameter for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average cooling water effluent plant loading for a parameter for a month is the arithmetic mean of the daily cooling water effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 562/94, s. 14.

PART IV
PARAMETER AND LETHALITY LIMITS

PARAMETER LIMITS

15. (1) Each discharger shall ensure that each daily process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2.

(2) Each discharger shall ensure that each monthly average process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the monthly average plant loading limit specified for the parameter and the plant in Column 4 of Schedule 2.

(3) Subject to subsection (4), each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the pH value of any sample collected at a process effluent sampling point at the plant is within the range of 6.0 to 9.5.

(4) Throughout any day on which a discharger has used an alternate sampling point on a process effluent monitoring stream for sampling required by section 22, as permitted by subsections 22 (7) and (8), the discharger,

(a) shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

(b) need not comply with subsection (3) with respect to the stream. O. Reg. 562/94, s. 15.

LETHALITY LIMITS

16. Each discharger shall control the quality of each process effluent monitoring stream and each cooling water effluent monitoring stream at the discharger's plant to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected under section 23 or 24 at the plant results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 562/94, s. 16.

PART V
MONITORING

MONITORING — GENERAL

17. (1) Despite sections 18 to 26, a discharger need not collect samples from any stream at the discharger's plant on a day on which there is no process effluent or cooling water effluent that is being discharged from the plant.

(2) Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters, the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(3) A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(4) Subject to subsection (5), each discharger shall pick up all sets of samples required to be picked up at the discharger's plant under sections 18 and 19 between the hours of 7 a.m. and 10 a.m.

(5) If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger's plant are such that it would be impractical to pick up a set of samples from each sampling point established at the plant under this Regulation within the time period specified in subsection (4), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (4).

(6) Subject to subsections (7) and (8), where a discharger is required by section 18, 19 or 20 to pick up a set of samples, the discharger shall pick up a set collected over the 24-hour period immediately preceding the pick-up.

(7) The 24-hour period referred to in subsection (6) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (4) or of a different three-hour period specified in a notice under subsection (5).

(8) Where a notice has been given under subsection (5) in respect of a plant specifying a time period longer than three hours, the 24-hour period referred to in subsection (6) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(9) If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (5) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (5) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 562/94, s. 17.

MONITORING — PROCESS EFFLUENT — DAILY

18. (1) Each discharger shall, on each day, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is daily.

(2) A discharger need not meet the requirements of subsection (1) where it is impossible to do so because of sampling by a provincial officer. O. Reg. 562/94, s. 18.

MONITORING — PROCESS EFFLUENT — WEEKLY

19. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 562/94, s. 19.

MONITORING — ALTERNATE SAMPLING POINT USED UNDER SECTION 23 — WEEKLY

20. (1) In addition to complying with section 19, on one day in each week, each discharger shall pick up a set of samples collected at each alternate sampling point established for the purposes of section 23 at the discharger's plant and shall analyze each set of samples for the following parameters:

1. Dissolved Organic Carbon (DOC), referred to as Analytical Test Group 5a in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

2. Total Suspended Solids (TSS), referred to as Analytical Test Group 8 in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

3. Phenolics (4AAP), referred to as Analytical Test Group 14 in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 562/94, s. 20.

MONITORING — PROCESS EFFLUENT — QUALITY CONTROL

21. (1) On one day in each year after 1994, on a day on which samples are picked up at the plant under subsection 19 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 19 (1) at one process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly.

(2) Each discharger shall prepare a travelling blank and travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994.

(3) There shall be an interval of at least six months between successive pick-up days at the plant under subsection (1). O. Reg. 562/94, s. 21.

MONITORING — PROCESS EFFLUENT — pH MEASUREMENT

22. (1) Each discharger shall, on each day during the time period applicable to the plant under subsection 17 (4) or (5), collect a grab sample from each process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(2) Each discharger shall, within each 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) on each day, collect two more grab samples from each process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(3) There shall be an interval of at least four hours between each of the three collections at a stream under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each day during the time period applicable to the plant under subsection 17 (4) or (5), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection in each day.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period.

(7) For the purposes of this section, a discharger shall use either the sampling point established under section 8 on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(8) Before using an alternate sampling point under subsection (7), a discharger shall give the Director a written notice describing the location of the alternate sampling point, together with a revised version of the list and plot plan submitted under section 9 showing the alternate sampling point. O. Reg. 562/94, s. 22.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

23. (1) Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", dated July, 1990.

(2) Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) On one day in each month, on a day on which samples are picked up at the plant under subsection 19 (1), each discharger shall collect and immediately pick up a grab sample from each process effluent sampling point at the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(4) For the purposes of this section, a discharger may, instead of using a process effluent sampling point on a stream, use an alternate sampling point located downstream of the process effluent sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(5) Subsection (4) applies only if the process effluent in the stream is intentionally combined with cooling water effluent before discharge from the plant.

(6) There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (3).

(7) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(8) Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(9) Samples picked up at a plant under subsection (8) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(10) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (8) shall be picked up on a day on which samples are picked up at the plant under subsection 19 (1).

(11) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (8).

(12) All samples picked up under subsection (8) in a quarter shall be picked up on the same day in the quarter.

(13) If a rainbow trout acute lethality test performed under subsection (8) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (8) to (12) cease to apply in respect to samples from that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further 12 consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

(14) A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger's plant, within 30 days after the day on which the change begins. O. Reg. 562/94, s. 23 (1-14).

(15), (16) REVOKED: O. Reg. 562/94, s. 23 (17).

(17) SPENT: O. Reg. 562/94, s. 23 (17).

(18) Subsections (2) to (17) apply with necessary modifications to each cooling water effluent sampling point and, for the purpose, the reference in subsection (3) to each process effluent sampling point shall be deemed to be a reference to each cooling water effluent sampling point and the reference in subsections (3) and (10) to subsection 19 (1) shall be deemed to be a reference to subsection 26 (1).

(19) A discharger need not perform any monitoring under subsection (18) in any month in which the discharger uses an alternate sampling point in accordance with subsection (4). O. Reg. 562/94, s. 23 (18, 19).

MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

24. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*", dated July, 1990.

(2) Subsections 23 (2) to (19) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna.*

(3) Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger's plant under this section on a day on which the discharger collects a sample from the sampling point under section 23, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 23. O. Reg. 562/94, s. 24.

MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

25. (1) Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", dated February, 1992.

(2) Where a discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*", dated February, 1992.

(3) On one day in each semi-annual period, on a day on which samples are picked up at the plant under subsection 19 (1), each discharger shall collect and immediately pick up a grab sample from each process effluent sampling point at the discharger's plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

(4) There shall be an interval of at least 90 days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a semi-annual period shall be picked up on the same day in the semi-annual period.

(6) A discharger need not collect a sample from a sampling point in accordance with subsection (3) until 12 consecutive monthly rainbow trout acute lethality tests and 12 consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at a discharger's plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 562/94, s. 25.

MONITORING — COOLING WATER EFFLUENT — WEEKLY ASSESSMENT

26. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each cooling water effluent sampling point at the discharger's plant and shall analyze each set of samples for each assessment parameter listed in Schedule 3 for that discharger's plant.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 562/94, s. 26.

PART VI
EFFLUENT VOLUME

FLOW MEASUREMENT — GENERAL

27. (1) For the purposes of this section, a volume of effluent for a stream for a day is the volume that flowed past the sampling point established under Part II on the stream during the 24-hour period preceding the pick-up of the first sample picked up from the sampling point for the day.

(2) Each discharger shall determine in cubic metres a daily volume of effluent for each process effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(3) Despite subsection (2), where a process effluent stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of individual batch volume measurements.

(4) Each discharger shall use flow measurement methods that allow the daily volumes for process effluent streams to be determined to an accuracy of within plus or minus 15 per cent.

(5) Each discharger shall determine in cubic metres a daily volume of effluent for each cooling water effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(6) Each discharger shall use flow measurement methods that allow the daily volumes for cooling water effluent streams to be determined to an accuracy of within plus or minus 20 per cent.

(7) Each discharger shall, no later than the day that this section comes into force, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each flow measurement method used under subsections (2) and (3) meets the accuracy requirements of subsection (4) and that each flow measurement method used under subsection (5) meets the accuracy requirements of subsection (6).

(8) Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsection (4) or (6), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(9) Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger's plant and shall maintain each flow measurement system according to good operating practices.

(10) Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 562/94, s. 27.

FLOW MEASUREMENT — ALTERNATE SAMPLING POINTS USED UNDER SECTION 23

28. (1) For the purposes of this section, a daily alternate volume of effluent for a stream for a day is the volume that flowed past the alternate sampling point established on the stream for the purposes of subsection 23 (4) during the 24-hour period preceding the pick-up of the first sample picked up from the alternate sampling point for the day.

(2) Each discharger shall determine in cubic metres a daily alternate volume of effluent for each stream at the discharger's plant on which an alternate sampling point has been established for the purposes of section 23, for each day on which a sample is collected under this Regulation from the alternate sampling point, by integration of continuous flowrate measurements.

(3) Subsections 27 (3), (4), (7), (8), (9) and (10) apply with necessary modifications to determinations under this section. O. Reg. 562/94, s. 28.

CALCULATION OF PLANT VOLUMES

29. (1) Each discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

(2) For the purposes of subsection (1), a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under section 27 for the day.

(3) Each discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) for the month.

(4) Each discharger shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.

(5) For the purposes of subsection (4), a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under section 27 for the day.

(6) Each discharger shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection (4) for the month.

(7) Each discharger shall calculate, in cubic metres, a monthly average alternate volume of effluent for the discharger's plant for each month, by taking the arithmetic mean of the daily alternate volumes determined under section 28 for the month. O. Reg. 562/94, s. 29.

PART VII
STORM WATER CONTROL STUDY

STORM WATER CONTROL STUDY

30. (1) Each discharger shall complete a storm water control study in respect of the discharger's plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994.

(2) A discharger need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994; and

(b) the discharger notifies the Director in writing, by August 28, 1995, that the plant meets the exemption criteria referred to in clause (a).

(3) Subject to subsection (4), a discharger shall complete the storm water control study in respect of the discharger's plant by August 26, 1996. O. Reg. 562/94, s. 30 (1-3).

(4) A discharger may postpone completion of the storm water control study in respect of the discharger's plant until August 26, 1998 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices, or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, by August 26, 1996, of the plans referred to in clause (a). O. Reg. 562/94, s. 30 (4); O. Reg. 526/95, s. 4.

(5) Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 562/94, s. 30 (5).

PART VIII
RECORDS AND REPORTS

RECORD KEEPING

31. (1) Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 18, 19, 20, 22 and 26, all calculations performed under sections 12, 13 and 14 and all determinations and calculations made or performed under sections 27, 28 and 29.

(2) Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 7, including, for each sample, the date, the time of pick-up, the sampling procedures used, and any incidents likely to affect the analytical results.

(3) Each discharger shall keep records of the results of all monitoring performed under sections 21 and 23 to 25.

(4) Each discharger shall keep records of all maintenance and calibration procedures performed under sections 27 and 28.

(5) Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction, and including a description of any remedial action taken.

(6) Each discharger shall keep records of any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with Part II before being discharged, stating the date, duration, cause and nature of each incident.

(7) Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger's plant.

(8) Each discharger shall keep records of the daily production, in tonnes, for the products listed in Column 2 of Schedule 4 for the discharger's plant.

(9) Each discharger shall keep records of the location of each sampling point established at the discharger's plant under Part II.

(10) Each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(11) Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger's plant, on request during the plant's normal office hours. O. Reg. 562/94, s. 31.

REPORTS AVAILABLE TO THE PUBLIC

32. (1) On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of plant loadings calculated under sections 12 and 14;

(b) a summary of results of monitoring performed under sections 18, 19, 20 and 22 to 26;

(c) a summary of calculations performed under subsections 29 (1), (4) and (7);

(d) a summary of the loadings or other results that exceeded a limit prescribed by section 15 or 16; and

(e) a summary of the incidents in which process effluent was discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with Part II before being discharged.

(2) Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger's plant, on request, during the plant's normal office hours.

(3) Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1). O. Reg. 562/94, s. 32.

REPORTS TO THE DIRECTOR — GENERAL

33. (1) Each discharger shall notify the Director in writing of any change of name or ownership of the discharger's plant occurring after August 26, 1994, within 30 days after the end of the month in which the change occurs.

(2) Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger's plant, within 30 days of the change or redirection.

(3) A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week's duration.

(4) Each discharger shall notify the Director in writing if the discharger's plant has, for more than 90 consecutive days, operated at less than 75 per cent of the production rate specified in Schedule 4 for the discharger's plant, within 30 days of the end of the 90-day period. O. Reg. 562/94, s. 33.

REPORTS TO THE DIRECTOR ON COMPLIANCE WITH SECTION 6 AND PART IV

34. (1) Each discharger shall report any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with Part II before being discharged.

(2) Each discharger shall report any loading, concentration or other result that exceeds a limit prescribed by section 15 or 16.

(3) A report required under subsection (1) or (2) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 562/94, s. 34.

QUARTERLY REPORTS TO THE DIRECTOR

35. (1) No later than 45 days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger's plant throughout the quarter as required by subsections (3) to (8).

(2) A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format and signed by the discharger.

(3) A report under this section shall include all information included in a report given under section 34 during the quarter.

(4) Each discharger shall report, for each month in the quarter,

(a) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under sections 12 and 14 for each limited parameter and each assessment parameter; and

(b) the monthly average alternate loadings and the highest and lowest daily alternate loadings calculated under section 13 for each parameter listed in subsection 20 (1).

(5) Each discharger shall report, for each month in the quarter,

(a) the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under section 29; and

(b) the monthly average alternate volume calculated under subsection 29 (7) and the highest and lowest daily alternate volumes calculated for each stream under section 28.

(6) Each discharger shall report, for each month in the quarter, the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under section 29.

(7) Each discharger shall report the number of days in each month in the quarter on which process effluent was discharged from the discharger's plant.

(8) Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 22 for each process effluent monitoring stream at the discharger's plant. O. Reg. 562/94, s. 35.

REPORTS TO THE DIRECTOR ON CHRONIC TOXICITY TESTING

36. (1) Each discharger shall report to the Director the results of all monitoring performed under section 25, together with the date on which each sample was picked up, no later than 60 days after the end of each semi-annual period in which the monitoring was performed.

(2) A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 562/94, s. 36.

37. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 562/94, s. 37.

38. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 562/94, s. 38.

SCHEDULE 1
LIST OF REGULATED PLANTS

Plant Name	Location	Owner as of October 1992
Canada Alloy Casting Ltd.	Kitchener	Canada Alloy Casting Ltd.
Chrysler, Etobicoke Casting Plant	Toronto	Chrysler Canada Ltd.
Ford Motor Company of Canada Ltd. Windsor Casting Plant	Windsor	Ford Motor Company of Canada, Limited
Haley Industries Ltd.	Haley	Haley Industries Ltd.
Kubota Metal Corporation, Fahramet Division	Orillia	Kubota Corporation, Japan
Western Foundry Company Limited	Wingham	R.W.L. Investments Ltd. L.F.T. Investments Ltd.

O. Reg. 562/94, Sched. 1.

SCHEDULE 2
PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

PLANT: Ford Motor Company of Canada, Limited Windsor Casting Plant Windsor				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
2	Total Cyanide	W	25.0	-

5a	Dissolved Organic Carbon (DOC)	D	884	317
8	Total Suspended Solids (TSS)	D	3220	847
9	Aluminum	W	530	107
	Zinc	W	137	29.7
14	Phenolics (4AAP)	D	34.4	7.34

Explanatory Notes:
D = Daily Monitoring Requirement
W = Weekly Monitoring Requirement
ATG = Analytical Test Group
kg/day = kilograms per day

PLANT: Haley Industries Ltd., Haley				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1a	Biochemical Oxygen Demand	W	8.85	3.60
2	Total Cyanide	W	1.00	0.393
4a	Ammonia plus Ammonium	W	13.1	7.22
6	Total Phosphorus	W	0.844	0.309
8	Total Suspended Solids (TSS)	D	17.8	3.60
9	Aluminum	W	1.69	0.360
	Chromium	W	0.650	0.144
	Copper	W	0.534	0.144
	Silver	W	0.286	0.106
	Zinc	W	0.749	0.144
14	Phenolics (4AAP)	D	0.0433	0.00703

Explanatory Notes:
D = Daily Monitoring Requirement
W = Weekly Monitoring Requirement
ATG = Analytical Test Group
kg/day = kilograms per day

O. Reg. 562/94, Sched. 2.

SCHEDULE 3
COOLING WATER ASSESSMENT MONITORING REQUIREMENTS

PLANT: Canada Alloy Casting Ltd., Kitchener		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	Dissolved Organic Carbon (DOC)	W
8	Total Suspended Solids (TSS)	W

Explanatory Notes:
W = Weekly Monitoring Requirement
ATG = Analytical Test Group

PLANT: Chrysler, Etobicoke Casting Plant, Toronto		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	Dissolved Organic Carbon (DOC)	W
8	Total Suspended Solids (TSS)	W
30	Fluoride	W

Explanatory Notes:
W = Weekly Monitoring Requirement
ATG = Analytical Test Group

PLANT: Kubota Metal Corporation, Fahramet Division, Orillia		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	Dissolved Organic Carbon (DOC)	W
8	Total Suspended Solids (TSS)	W
14	Phenolics (4AAP)	W

Explanatory Notes:
W = Weekly Monitoring Requirement
ATG = Analytical Test Group

PLANT: Western Foundry Company Limited, Wingham		
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	Dissolved Organic Carbon (DOC)	W
8	Total Suspended Solids (TSS)	W
14	Phenolics (4AAP)	W
30	Fluoride	W

Explanatory Notes:
W = Weekly Monitoring Requirement
ATG = Analytical Test Group

O. Reg. 562/94, Sched. 3.

SCHEDULE 4
PRODUCTS AND PRODUCTION RATE

Plant Name	Products	Reference Production Rate (tonnes/day)
Column 1	Column 2	Column 3
Ford Motor Company of Canada Ltd., Windsor Casting Plant	Automotive parts	1180
Haley Industries Ltd.	Aerospace castings	2.7

O. Reg. 562/94, Sched. 4.

Environmental Protection Act
Loi sur la protection de l'environnement

ONTARIO REGULATION 760/93

Amended to O. Reg. 645/98

EFFLUENT MONITORING AND EFFLUENT LIMITS — PULP AND PAPER SECTOR

Notice of Currency:* This document is up to date.

*This notice is usually current to within two business days of accessing this document. For more current amendment information, see the Table of Regulations (Legislative History).

This Regulation is made in English only.

PART I
GENERAL

INTERPRETATION

1. (1) In this Regulation,

"AOX" means adsorbable organic halide;

"assessment parameter" means a parameter that is listed in Schedule 3;

"bleached pulp" means pulp that has been bleached through the use of chlorine or chlorine compounds;

"blowdown water" means recirculating water that is discharged from a cooling water system for the purpose of controlling the level of water in the cooling water system or for the purpose of discharging from the cooling water system materials contained in the cooling water system the further build-up of which would impair the operation of the system;

"cooling water effluent" means water and associated material that is used in an industrial process for the purpose of removing heat and that has not, by design, come into contact with process materials, but does not include blowdown water;

"cooling water effluent monitoring stream" means a cooling water effluent stream on which a sampling point is established under section 8;

"cooling water effluent sampling point" means a sampling point established on a cooling water effluent stream under section 8;

"Director", in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger's plant is located and includes an alternate named by the Director;

"discharger" means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

"dried" includes machine dried and, in relation to bleached pulp or other types of pulp, means dried in a manner so that the moisture content of the pulp does not exceed 10 per cent;

"finished product" means pulp, paper and paper products that have completed the production process at a plant, and includes bleached pulp;

"limited parameter", in relation to a plant, means a parameter for which a limit is specified for the plant in Column 3 or 4 of Schedule 2;

"pick up", in relation to a sample, means pick up for the purpose of transportation to and analysis at a laboratory;

"plant" means an industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;

"process change" means a change in equipment, production processes, process materials or treatment processes;

"process effluent" means,

(a) effluent that, by design, has come into contact with process materials,

(b) blowdown water,

(c) effluent that results from cleaning or maintenance operations at a plant during a period when all or part of the plant is shut down,

(d) effluent from a waste disposal site at a plant,

(e) effluent from a bark storage site at a plant,

(f) effluent that is discharged from an intake water treatment operation at a plant, but does not include effluent that is discharged from an intake water screening operation at a plant, and

(g) any effluent described in clauses (a) to (f) combined with cooling water effluent or storm water effluent;

"process effluent monitoring stream" means a process effluent stream on which a sampling point is established under section 8;

"process effluent sampling point" means a sampling point established on a process effluent stream under section 8;

"process materials", in relation to a discharger's plant, means raw materials for use in an industrial process at the plant, manufacturing intermediates produced at the plant, or products or by-products of an industrial process at the plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

"pulp" means processed cellulose fibre that is derived from wood, other plant material or recycled paper products;

"quarter" means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

"semi-annual period" means all or part of a period of six months beginning on the first day of January or July;

"specific parameter", in relation to a plant, means 2, 3, 7, 8-tetrachlorodibenzo-para-dioxin, 2, 3, 7, 8-tetrachlorodibenzofuran, and 2, 3, 7, 8 substituted dioxin and furan congeners;

"storm water effluent" means run-off from a storm event or thaw that is not used in any industrial process.

(2) For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(3) An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger's behalf. O. Reg. 760/93, s. 1.

PURPOSE

2. The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants listed in Schedule 1 and to require dischargers to prepare reports that describe methods that could be used to work toward the Ministry's goal of eliminating the generation of AOX at dischargers' plants by the year 2002. O. Reg. 760/93, s. 2.

APPLICATION

3. (1) This Regulation applies only with respect to the plants listed in Schedule 1. O. Reg. 760/93, s. 3 (1).

(2) This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer. O. Reg. 760/93, s. 3 (2); O. Reg. 521/95, s. 1.

REQUIREMENTS UNDER APPROVALS, ORDERS, ETC.

4. For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 521/95, s. 2.

NON-APPLICATION OF GENERAL EFFLUENT MONITORING REGULATION

5. This Regulation is not a Sectoral Effluent Monitoring Regulation within the meaning of Ontario Regulation 695/88. O. Reg. 760/93, s. 5.

BY-PASSES

6. Beginning on January 1, 1996, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger's plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 521/95, s. 3.

SAMPLING AND ANALYTICAL PROCEDURES

7. (1) Each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994. O. Reg. 760/93, s. 7 (1); O. Reg. 521/95, s. 4.

(2) Each discharger shall maintain the sampling equipment used at the discharger's plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of each limited parameter, assessment parameter and specific parameter from the plant. O. Reg. 760/93, s. 7 (2).

PART II
SAMPLING POINTS

ESTABLISHMENT AND ELIMINATION OF SAMPLING POINTS

8. (1) Each discharger shall, by February 23, 1994, establish a sampling point on each process effluent and cooling water effluent stream at the discharger's plant, as necessary so that the plant loadings calculated under sections 12 and 13 for each limited parameter and assessment parameter and the concentrations determined for each specific parameter accurately reflect the level of discharge of each such parameter from the plant. O. Reg. 760/93, s. 8 (1).

(1.1) Each discharger for the Thunder Bay Packaging Inc. plant shall, by December 20, 1995, establish a sampling point on each process effluent and cooling water effluent stream at the discharger's plant, as necessary so that the plant loadings calculated under sections 12 and 13 for each limited parameter and assessment parameter and the concentrations determined for each specific parameter accurately reflect the level of discharge of each such parameter from the plant.

(1.2) A discharger referred to in subsection (1.1) need not comply with subsection (1). O. Reg. 521/95, s. 5.

(2) If circumstances change so that a new sampling point is necessary at a discharger's plant in order to permit the calculation of plant loadings under sections 12 and 13 for each limited parameter and assessment parameter and the determination of concentrations for each specific parameter that accurately reflect the level of discharge of each such parameter from the plant, the discharger shall, within thirty days of the change, establish the new sampling point.

(3) A discharger may eliminate a sampling point established under subsection (1) or (2) if the sampling point is no longer necessary to permit the calculation of plant loadings under sections 12 and 13 for each limited parameter and assessment parameter and the determination of concentrations for each specific parameter that accurately reflect the level of discharge of each such parameter from the plant.

(4) For the purposes of this section, a plant loading for a parameter or a concentration for a parameter that is based on analytical results that are significantly affected by dilution or masking due to the merging of streams upstream of a sampling point at a plant is not a loading or a concentration that accurately reflects the level of discharge of the parameter from the plant.

(5) In determining what is necessary to meet a discharger's obligations to establish sampling points under this section, the discharger shall consider both which streams should have sampling points and where on a stream a sampling point should be located. O. Reg. 760/93, s. 8 (2-5).

(6) Despite subsection (1), a discharger need not establish a sampling point on a by-pass. O. Reg. 521/95, s. 5.

REPORTS ON SAMPLING POINTS

9. (1) By March 7, 1994, each discharger shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger's plant as of February 23, 1994. O. Reg. 760/93, s. 9 (1).

(1.1) By March 31, 1996, each discharger for the Thunder Bay Packaging Inc. plant shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger's plant as of December 20, 1995.

(1.2) A discharger referred to in subsection (1.1) need not comply with subsection (1). O. Reg. 521/95, s. 6.

(2) Within thirty days after establishing a sampling point under this Regulation that is not shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing the location of the sampling point, together with a revised list and plot plan showing the sampling point.

(3) Within thirty days after eliminating a sampling point under this Regulation that is shown on a list and plot plan submitted under this section, the discharger shall give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point. O. Reg. 760/93, s. 9 (2, 3).

USE OF SAMPLING POINTS ESTABLISHED UNDER THIS PART

10. Subject to section 22, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 760/93, s. 10.

PART III
CALCULATION OF LOADINGS

CALCULATION OF LOADINGS — GENERAL

11. (1) For the purposes of performing a calculation under sections 12 and 13, a discharger shall use the actual analytical result obtained by the laboratory. O. Reg. 760/93, s. 11 (1).

(2) Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" dated August, 1994, the discharger shall use the value zero for the purpose of performing a calculation under sections 12 and 13. O. Reg. 760/93, s. 11 (2); O. Reg. 521/95, s. 7.

(3) Each discharger shall ensure that each calculation of a process effluent loading required by section 12 is performed as soon as reasonably possible after the analytical result on which the calculation is based becomes available to the discharger.

(4) Each discharger shall ensure that each calculation of a cooling water effluent loading required by section 13 is performed in time to comply with subsection 34 (4). O. Reg. 760/93, s. 11 (3, 4).

CALCULATION OF LOADINGS — PROCESS EFFLUENT

12. (1) Each discharger shall calculate, in kilograms, a daily process effluent stream loading for each limited parameter in each process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 27, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily process effluent plant loading for each limited parameter for each day for which the discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1), the daily process effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily process effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average process effluent plant loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average process effluent plant loading for a parameter for a month is the arithmetic mean of the daily process effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 760/93, s. 12.

CALCULATION OF LOADINGS — COOLING WATER

13. (1) Each discharger shall calculate, in kilograms, a daily cooling water effluent stream loading for each assessment parameter in each cooling water effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2) When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 27, for the stream for the day.

(3) Each discharger shall calculate, in kilograms, a daily cooling water effluent plant loading for each assessment parameter for each day for which the discharger is required to calculate a daily cooling water effluent stream loading for the parameter under subsection (1).

(4) For the purposes of subsection (3), a daily cooling water effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5) Where a discharger calculates only one daily cooling water effluent stream loading for a parameter for a day under subsection (1), the daily cooling water effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily cooling water effluent stream loading for the parameter for the day.

(6) Each discharger shall calculate, in kilograms, a monthly average cooling water effluent plant loading for each assessment parameter for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger's plant for analysis for the parameter.

(7) For the purposes of subsection (6), a monthly average cooling water effluent plant loading for a parameter for a month is the arithmetic mean of the daily cooling water effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 760/93, s. 13.

PART IV
PARAMETER AND LETHALITY LIMITS

PARAMETER LIMITS

14. (1) Subject to subsection (2) and section 15, each discharger shall ensure that each daily process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2. O. Reg. 760/93, s. 14 (1).

(2) Subject to section 15, each discharger for which a daily plant loading limit for AOX is listed in Column 3 of Schedule 2 shall ensure that each daily process effluent plant loading calculated for the parameter under section 12 in connection with the discharger's plant,

(a) from February 23, 1994 to December 30, 1995, does not exceed the phase-one daily plant loading limit specified for the para-meter and the plant in Column 3 of Schedule 2;

(b) from December 31, 1995 to December 30, 1998, does not exceed the phase-two daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2; and

(c) after December 30, 1998, does not exceed the phase-three daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2. O. Reg. 760/93, s. 14 (2); O. Reg. 645/98, s. 1 (1).

(3) Subject to subsection (4) and section 15, each discharger shall ensure that each monthly average process effluent plant loading calculated for a parameter under section 12 in connection with the discharger's plant does not exceed the monthly average plant loading limit specified for the parameter and the plant in Column 4 of Schedule 2. O. Reg. 760/93, s. 14 (3).

(4) Subject to section 15, each discharger for which a monthly average plant loading limit for AOX is listed in Column 4 of Schedule 2 shall ensure that each monthly average process effluent plant loading calculated for the parameter under section 12 in connection with the discharger's plant,

(a) from February 23, 1994 to December 30, 1995, does not exceed the phase-one monthly average plant loading limit specified for the parameter and the plant in Column 4 of Schedule 2;

(b) from December 31, 1995 to December 30, 1998, does not exceed the phase-two monthly average plant loading limit specified for the parameter and the plant in Column 4 of Schedule 2; and

(c) after December 30, 1998, does not exceed the phase-three monthly average plant loading limit specified for the parameter and the plant in Column 4 of Schedule 2. O. Reg 760/93, s. 14 (4); O. Reg. 645/98, s. 1 (2).

(5) Each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the concentration of 2, 3, 7, 8-tetrachlorodibenzo-para-dioxin and the concentration of 2, 3, 7, 8-tetrachlorodibenzofuran are both non-measurable in any sample collected at a process effluent sampling point at the plant.

(6) For the purposes of subsection (5), the concentration of 2, 3, 7, 8-tetrachlorodibenzo-para-dioxin in a sample is non-measurable if analysis of the sample shows a concentration of 2, 3, 7, 8-tetrachlorodibenzo-para-dioxin of less than 20 picograms per litre and the concentration of 2, 3, 7, 8-tetrachlorodibenzofuran in a sample is non-measurable if analysis of the sample shows a concentration of 2, 3, 7, 8-tetrachlorodibenzofuran of less than 50 picograms per litre. O. Reg. 760/93, s. 14 (5, 6).

(7) Each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the total toxic equivalent concentration of 2, 3, 7, 8 substituted dioxin and furan congeners in any sample collected at a process effluent sampling point at the plant, calculated in accordance with the methods described in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994, does not exceed 60 picograms per litre. O. Reg. 760/93, s. 14 (7); O. Reg. 521/95, s. 8.

(8) Subject to subsection (9), each discharger shall control the quality of each process effluent monitoring stream at the discharger's plant to ensure that the pH value of any sample collected at a process effluent sampling point at the plant is within the range of 6.0 to 9.5.

(9) Throughout any day on which a discharger has used an alternate sampling point on a process effluent monitoring stream for sampling required by section 22, as permitted by subsections 22 (7) and (8), the discharger,

(a) shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

(b) need not comply with subsection (8) with respect to the stream. O. Reg. 760/93, s. 14 (8, 9).

Revised Parameter Limits

15. (1) Beginning on January 1, 1996, each discharger may annually calculate a revised daily plant loading limit and a revised monthly average plant loading limit for each limited parameter. O. Reg. 760/93, s. 15 (1).

(1.1) Beginning on January 31, 1997, each discharger for the Thunder Bay Packaging Inc. plant may annually calculate a revised daily plant loading limit and a revised monthly average plant loading limit for each limited parameter.

(1.2) Subsection (1) does not apply to a discharger referred to in subsection (1.1). O. Reg. 521/95, s. 9.

(2) Despite subsection (1), beginning on January 1, 1995, each discharger for which a limit for AOX is listed in Columns 3 and 4 of Schedule 2 may annually calculate a revised daily plant loading limit and a revised monthly average plant loading limit for AOX.

(3) Each discharger shall calculate, to three significant figures, a revised daily plant loading limit for a limited parameter by dividing the revised reference production rate of finished product at the discharger's plant as determined under subsection

(4) by the reference production rate of finished product specified in Schedule 4 for the discharger's plant, and multiplying that ratio by the daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2.

(4) For the purposes of subsection (3), the revised reference production rate of finished product at a discharger's plant is equal to the highest value of the ninetieth percentiles of the daily production of finished product at the plant for the three calendar years preceding the calendar year in which the revised limit is to come into force.

(5) To determine the highest value of the ninetieth percentiles of the daily production of finished product at the plant for the three calendar years, the discharger shall do the following:

1. Determine, in tonnes, the amount of dried finished product that was produced by the plant on each day that the plant operated in each of the three calendar years.
2. For each of the three calendar years, determine the statistically derived value that is equal to the amount of dried finished product, produced daily by the plant, that was exceeded on 10 per cent of the days that the plant operated in that calendar year.
3. Take the highest of the values determined under step 2.

(6) The reference production rate and the revised reference production rate to be used for the purpose of calculating a revised daily plant loading limit for AOX are the rates of production of bleached pulp and, for the purpose, a reference in subsections (3) to (5) to finished product shall be deemed to be a reference to bleached pulp.

(7) For the purposes of subsection (3), the daily plant loading limit for AOX is the limit set out for the parameter and the plant in Column 3 of Schedule 2 that is in effect on the first day of January in the calendar year in which the revised limit is to come into force.

(8) If the revised daily plant loading limit calculated for a limited parameter under subsection (3) exceeds the daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2 by no more than 15 per cent, the discharger may notify the Director in writing of the value of the revised limit and of the value of the revised reference production rate used for the purpose of calculating that limit.

(9) A notice under subsection (8) shall be given to the Director in writing on or before January 31 in the calendar year in which the revised limit is to come into force.

(10) Where a notice is given under subsection (8), the revised daily plant loading limit calculated for the limited parameter under subsection (3) shall be deemed to replace the daily plant loading limit specified for the parameter and the plant in Column 3 of Schedule 2.

(11) Despite subsection (10), the daily plant loading limit specified for a parameter and a plant in Column 3 of Schedule 2 shall always be used for the purpose of making a calculation under subsection (3) or for the purpose of making a determination under subsection (8) or (14).

(12) Where a notice is given under subsection (8) with respect to a limited parameter and a revised daily plant loading limit is already in force with respect to the limited parameter, the revised daily plant loading limit calculated for the limited parameter under subsection (3) shall be deemed to replace the revised daily plant loading limit that is currently in force.

(13) Subsections (3) to (12) apply with necessary modifications for the purpose of calculating and using a revised monthly average plant loading limit and, for the purpose, a reference in those subsections to a revised daily plant loading limit shall be deemed to be a reference to a revised monthly average plant loading limit, a reference to a daily plant loading limit shall be deemed to be a reference to a monthly average plant loading limit, and a reference to Column 3 of Schedule 2 shall be deemed to be a reference to Column 4 of Schedule 2.

(14) If a revised limit calculated for a limited parameter under subsection (3) exceeds the applicable limit specified for the parameter and the plant in Column 3 or 4 of Schedule 2 by more than 15 per cent, the discharger may apply to the Director for approval to revise the limit.

(15) An application under subsection (14) shall be submitted together with the results of a receiving water assessment study that the discharger has prepared for the purpose of identifying what effect the proposed revised limit would have on the receiving water.

(16) The Director shall approve an application under subsection (14) if the Director is satisfied, based on the results of the receiving water assessment study, that the proposed revised limit would not have an adverse effect on the receiving water. O. Reg. 760/93, s. 15 (2-16).

(17) Despite subsections (10), (12) and (16), a revised limit that is in force with respect to AOX expires,

(a) on January 31, 1996, if a phase-one limit is used for the purpose of the calculation of the revised limit;

(b) on January 31, 1999, if a phase-two limit is used for the purpose of the calculation of the revised limit. O. Reg. 760/93, s. 15 (17); O. Reg. 645/98, s. 2.

(18) Nothing in this section shall be interpreted to relieve a discharger of the obligation to apply for any certificate of approval that may be required under the *Ontario Water Resources Act* or the *Environmental Protection Act*. O. Reg. 760/93, s. 15 (18).

LETHALITY LIMITS

16. Each discharger shall control the quality of each process effluent monitoring stream and each cooling water effluent monitoring stream at the discharger's plant to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a process effluent sampling point or cooling water effluent sampling point at the plant results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 760/93, s. 16.

PART V
MONITORING

MONITORING — GENERAL

17. (1) Despite sections 18 to 26, a discharger need not collect samples from any stream at the discharger's plant on a day on which there is no process effluent that is being discharged from the plant.

(2) Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(3) A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(4) Subject to subsection (5), each discharger shall pick up all sets of samples required to be picked up at the discharger's plant under sections 18, 19 and 20 between the hours of 7 a.m. and 10 a.m.

(5) If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger's plant are such that it would be impractical to pick up a set of samples from each sampling point established at the plant under this Regulation within the time period specified in subsection (4), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (4).

(6) Subject to subsections (7) and (8), where a discharger is required by section 18, 19 or 20 to pick up a set of samples the discharger shall pick up a set collected over the twenty-four-hour period immediately preceding the pick-up.

(7) The twenty-four-hour period referred to in subsection (6) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (4) or of a different three-hour period specified in a notice under subsection (5).

(8) Where a notice has been given under subsection (5) in respect of a plant specifying a time period longer than three hours, the twenty-four-hour period referred to in subsection (6) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(9) If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (5) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (5) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 760/93, s. 17.

MONITORING — PROCESS EFFLUENT — DAILY

18. (1) Each discharger shall, on each day, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is daily.

(2) A discharger need not meet the requirements of subsection (1) where it is impossible to do so because of sampling by a provincial officer. O. Reg. 760/93, s. 18.

MONITORING — PROCESS EFFLUENT — WEEKLY

19. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 760/93, s. 19.

MONITORING — PROCESS EFFLUENT — QUARTERLY

20. (1) Each discharger shall, on one day in each quarter, pick up a set of samples collected at each process effluent sampling point at the discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is quarterly.

(2) There shall be an interval of at least forty-five days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a quarter shall be picked up on the same day in the quarter. O. Reg. 760/93, s. 20.

(4) Each discharger for the Kimberly-Clark Canada Inc., Huntsville plant shall, twice during all or part of each six-month period beginning on October 15, pick up a set of samples collected at each process effluent sampling point at the discharger's plant, and shall analyze each set of samples for each specific parameter.

(5) Despite subsection (4), if process effluent is discharged continuously from the plant for a period lasting three months or more during any six-month period beginning on April 15, subsection (4) ceases to apply at the end of the three-month period and each discharger for the plant shall instead, on one day in each quarter, pick up a set of samples collected at each process effluent sampling point at the plant and shall analyze each set of samples for each specific parameter.

(6) If, during any six-month period beginning on April 15 during which subsection (5) applies, no process effluent is discharged from the plant for a period lasting three months or more, subsection (5) ceases to apply at the end of the three-month period and each discharger for the plant shall instead comply with subsection (4), until conditions at the plant make subsection (5) apply again.

(7) Each set of samples picked up at the discharger's plant under subsection (4) or (5) shall be picked up on a day on which samples are picked up at the plant under subsection 19 (1).

(8) There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (4) or (5).

(9) All samples picked up under subsection (4) or (5) in a quarter shall be picked up on the same day in the quarter. O. Reg. 521/95, s. 10.

MONITORING — PROCESS EFFLUENT — QUALITY CONTROL

21. (1) On one day in each year after 1993, on a day on which samples are picked up at the plant under subsection 19 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 19 (1) at one process effluent sampling point at the discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of Schedule 2 for the discharger's plant, is weekly. O. Reg. 760/93, s. 21 (1).

(2) Each discharger shall prepare a travelling blank and travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry of Environment and Energy publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", dated August, 1994. O. Reg. 760/93, s. 21 (2); O. Reg. 521/95, s. 11.

(3) There shall be an interval of at least six months between successive pick-up days at the plant under subsection (1). O. Reg. 760/93, s. 21 (3).

MONITORING — PROCESS EFFLUENT — pH MEASUREMENT

22. (1) Each discharger shall, on each day during the time period applicable to the plant under subsection 17 (4) or (5), collect a grab sample from each process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(2) Each discharger shall, within each twenty-four hour period beginning with the collection of the first grab sample at the plant under subsection (1) on each day, collect two more grab samples from each process effluent monitoring stream at the discharger's plant and shall analyze each sample for the parameter pH.

(3) There shall be an interval of at least four hours between each of the three collections at a stream under subsections (1) and (2) in each twenty-four-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within twenty-four hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each day during the time period applicable to the plant under subsection 17 (4) or (5), and two more times in each twenty-four-hour period beginning with the first analysis at the plant under this subsection in each day.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each twenty-four-hour period.

(7) For the purposes of this section, a discharger shall use either the sampling point established under section 8 on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(8) Before using an alternate sampling point under subsection (7), a discharger shall give the Director a written notice describing the location of the alternate sampling point, together with a revised version of the list and plot plan submitted under section 9 showing the alternate sampling point. O. Reg. 760/93, s. 22.

MONITORING — COOLING WATER EFFLUENT — pH AND SPECIFIC CONDUCTANCE MEASUREMENT

22.1 (1) Each discharger shall, on one day in each week, on the day on which samples are picked up at the plant under section 26, collect a grab sample from each cooling water effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(2) Within the 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) in each week, the discharger shall collect two more grab samples from each cooling water effluent sampling point at the discharger's plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(3) There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4) Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5) Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH and the parameter specific conductance on one day in each week, on the day on which samples are picked up at the plant under section 26, and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection for the week.

(6) There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period. O. Reg. 521/95, s. 12.

MONITORING — ACUTE LETHALITY TESTING — RAINBOW TROUT

23. (1) Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", dated July, 1990.

(2) Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent.

(3) On one day in each month, on a day on which samples are picked up at the plant under subsection 19 (1), each discharger shall collect and immediately pick up a grab sample at each process effluent sampling point at the discharger's plant and shall perform a rainbow trout acute lethality test on each sample.

(4) There shall be an interval of at least fifteen days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a month shall be picked up on the same day in the month.

(6) Where a discharger has performed tests under subsection (3) for twelve consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample.

(7) Samples picked up at a plant under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection (3).

(8) If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection 19 (1).

(9) There shall be an interval of at least forty-five days between successive pick-up days at the plant under subsection (6).

(10) All samples picked up under subsection (6) in a quarter shall be picked up on the same day in the quarter.

(11) If a rainbow trout acute lethality test performed under subsection (6) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (6) to (10) cease to apply in respect to samples from that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further twelve consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test.

(12) A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger's plant, within thirty days after the day on which the change begins. O. Reg. 760/93, s. 23 (1-12).

(13), (14) REVOKED: O. Reg. 760/93, s. 23 (15).

(15) SPENT: O. Reg. 760/93, s. 23 (15).

(16) Subsections (2) to (15) apply with necessary modifications to each cooling water effluent sampling point and, for the purpose, the reference in subsection (3) to each process effluent sampling point shall be deemed to be a reference to each cooling water effluent sampling point and the reference in subsections (3) and (8) to subsection 19 (1) shall be deemed to be a reference to subsection 26 (1). O. Reg. 760/93, s. 23 (16).

MONITORING — ACUTE LETHALITY TESTING — *DAPHNIA MAGNA*

24. (1) Where a discharger is required by this section to perform a *Daphnia magna* acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*", dated July, 1990.

(2) Subsections 23 (2) to (16) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna*.

(3) Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger's plant under this section on a day on which the discharger collects a sample from the sampling point under section 23, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 23. O. Reg. 760/93, s. 24.

MONITORING — CHRONIC TOXICITY TESTING — FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

25. (1) Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows" dated February, 1992.

(2) Where a discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*", dated February, 1992.

(3) On one day in each semi-annual period, on a day on which samples are picked up at the plant under subsection 19 (1), each discharger shall collect and immediately pick up a grab sample from each process effluent sampling point at the discharger's plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.

(4) There shall be an interval of at least ninety days between successive pick-up days at the plant under subsection (3).

(5) All samples picked up under subsection (3) in a semi-annual period shall be picked up on the same day in the semi-annual period.

(6) A discharger need not collect a sample from a sampling point in accordance with subsection (3) until twelve consecutive monthly rainbow trout acute lethality tests and twelve consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at a discharger's plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 760/93, s. 25.

MONITORING — COOLING WATER EFFLUENT — WEEKLY ASSESSMENT

26. (1) Each discharger shall, on one day in each week, pick up a set of samples collected at each cooling water effluent sampling point at the discharger's plant and shall analyze each set of samples for each assessment parameter.

(2) There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(3) All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 760/93, s. 26.

PART VI
EFFLUENT VOLUME

FLOW MEASUREMENT

27. (1) For the purposes of this section, a volume of effluent for a stream for a day is the volume that flowed past the sampling point established under Part II on the stream during the twenty-four-hour period preceding the pick-up of the first sample picked up from the stream for the day.

(2) Each discharger shall determine in cubic metres a daily volume of effluent for each process effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(3) Despite subsection (2), where a process effluent stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of individual batch volume measurements.

(4) Each discharger shall use flow measurement methods that allow the daily volumes for process effluent streams to be determined to an accuracy of within plus or minus 15 per cent.

(5) Each discharger shall determine in cubic metres a daily volume of effluent for each cooling water effluent stream at the discharger's plant for each day on which a sample is collected under this Regulation from the stream.

(6) Each discharger shall use flow measurement methods that allow the daily volumes for cooling water effluent streams to be determined to an accuracy of within plus or minus 20 per cent.

(7) Each discharger shall, no later than the day that this section comes into force, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each flow measurement method used under subsections (2) and (3) meets the accuracy requirements of subsection (4) and that each flow measurement method used under subsection (5) meets the accuracy requirements of subsection (6).

(8) Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsection (4) or (6), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(9) Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger's plant and shall maintain each flow measurement system according to good operating practices.

(10) Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 760/93, s. 27.

CALCULATION OF PLANT VOLUMES

28. (1) Each discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

(2) For the purposes of subsection (1), a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under section 27 for the day.

(3) Each discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) for the month.

(4) Each discharger shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.

(5) For the purposes of subsection (4), a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under section 27 for the day.

(6) Each discharger shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection (4) for the month. O. Reg. 760/93, s. 28.

PART VII
STORM WATER CONTROL STUDY

29. (1) Each discharger shall complete a storm water control study in respect of the discharger's plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994. O. Reg. 760/93, s. 29 (1); O. Reg. 521/95, s. 13 (1).

(2) A discharger need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994; and

(b) the discharger notifies the Director in writing, by November 25, 1994, that the plant meets the exemption criteria referred to in clause (a). O. Reg. 760/93, s. 29 (2); O. Reg. 521/95, s. 13 (2).

(3) Subject to subsection (4), a discharger shall complete the storm water control study in respect of the discharger's plant by July 3, 1996. O. Reg. 760/93, s. 29 (3); O. Reg. 521/95, s. 13 (3).

(4) A discharger may postpone completion of the storm water control study in respect of the discharger's plant until January 1, 1997 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install waste water treatment facilities, implement management practices or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, by November 27, 1995, of the plans referred to in clause (a). O. Reg. 760/93, s. 29 (4).

(4.1) Subsections (2) to (4) do not apply to a discharger for the Thunder Bay Packaging Inc. plant.

(4.2) A discharger for the Thunder Bay Packaging Inc. plant need not comply with subsection (1) in respect of the discharger's plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994; and

(b) the discharger notifies the Director in writing, by December 15, 1996, that the plant meets the exemption criteria referred to in clause (a).

(4.3) Subject to subsection (4.4), each discharger at the Thunder Bay Packaging Inc. plant shall complete the storm water control study in respect of the discharger's plant by December 15, 1997.

(4.4) A discharger for the Thunder Bay Packaging Inc. plant may postpone completion of the storm water control study in respect of the discharger's plant until January 1, 1999 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, by December 15, 1997, of the plans referred to in clause (a). O. Reg. 521/95, s. 13 (4).

(5) Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 760/93, s. 29 (5).

PART VIII
RECORDS AND REPORTS

RECORD KEEPING

30. (1) Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 18, 19, 20, 22 and 26, all calculations performed under sections 12 and 13 and all determinations and calculations made or performed under sections 27 and 28.

(2) Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 7, including, for each sample, the date, the time of pick-up, the sampling procedures used and any incidents likely to affect the analytical results.

(3) Each discharger shall keep records of all calculations performed under section 15.

(4) Each discharger shall keep records of the results of all monitoring performed under sections 21 and 23 to 25.

(5) Each discharger shall keep records of all maintenance and calibration procedures performed under section 27.

(6) Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction, and including a description of any remedial action taken.

(7) Each discharger shall keep records of any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged, stating the date, duration, cause and nature of each incident.

(8) Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger's plant.

(9) Each discharger shall keep records of the amount of dried finished product, calculated in tonnes, that is produced daily at the discharger's plant.

(10) Each discharger for which a limit for AOX is listed in Columns 3 and 4 of Schedule 2 shall keep records of the amount of dried bleached pulp, calculated in tonnes, that is produced daily at the discharger's plant.

(11) Each discharger shall keep records of the location of each sampling point established at the discharger's plant under Part II.

(12) Each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(13) Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger's plant, on request, during the plant's normal office hours. O. Reg. 760/93, s. 30.

REPORTS AVAILABLE TO THE PUBLIC

31. (1) On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of plant loadings calculated under sections 12 and 13;

(b) a summary of the results of monitoring performed under sections 18, 19, 20 and 22 to 26;

(c) a summary of calculations performed under subsections 28 (1) and (4);

(d) the value of any revised limits calculated under section 15;

(e) a summary of the loadings, concentrations or other results that exceeded a limit under section 14, 15 or 16; and

(f) a summary of the incidents in which process effluent was discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged.

(2) Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger's plant, on request, during the plant's normal office hours.

(3) Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1). O. Reg. 760/93, s. 31.

REPORTS TO THE DIRECTOR — GENERAL

32. (1) Each discharger shall notify the Director in writing of any change of name or ownership of the discharger's plant occurring after November 25, 1993, within thirty days after the end of the month in which the change occurs.

(2) Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger's plant, within thirty days of the change or redirection.

(3) A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week's duration.

(4) Each discharger shall notify the Director in writing if the discharger's plant has, for more than ninety consecutive days, operated at less than 75 per cent of the reference production rate specified in Schedule 4 for finished product at the discharger's plant, within thirty days of the end of the ninety-day period.

(5) Each discharger for which a limit for AOX is listed in Columns 3 and 4 of Schedule 2 shall notify the Director in writing if the discharger's plant has, for more than ninety consecutive days, operated at less than 75 per cent of the reference production rate specified in Schedule 4 for bleached pulp at the discharger's plant, within thirty days of the end of the ninety-day period. O. Reg. 760/93, s. 32.

REPORTS TO THE DIRECTOR ON COMPLIANCE WITH SECTION 6 AND PART IV

33. (1) Each discharger shall report to the Director any incident in which process effluent is discharged from the discharger's plant without flowing past a sampling point established on a process effluent stream in accordance with this Regulation before being discharged.

(2) Each discharger shall report to the Director any loading, concentration or other result that exceeds a limit under section 14, 15 or 16.

(3) A report required under subsection (1) or (2) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 760/93, s. 33.

QUARTERLY REPORTS TO THE DIRECTOR

34. (1) No later than forty-five days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger's plant throughout the quarter as required by subsections (3) to (8).

(2) A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format and signed by the discharger.

(3) A report under this section shall include all information included in a report given under section 33 during the quarter.

(4) Each discharger shall report, for each month in the quarter, the monthly average plant loadings and the highest and lowest daily plant loadings calculated under sections 12 and 13 for each limited parameter and each assessment parameter.

(5) Each discharger shall report, for each month in the quarter, the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under section 28.

(6) Each discharger shall report, for each month in the quarter, the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under section 28.

(7) Each discharger shall report the number of days in each month in the quarter on which process effluent was discharged from the discharger's plant.

(8) Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 22 for each process effluent monitoring stream at the discharger's plant. O. Reg. 760/93, s. 34.

REPORTS TO THE DIRECTOR ON CHRONIC TOXICITY TESTING

35. (1) Each discharger shall report to the Director the results of all monitoring performed under section 25, together with the date on which each sample was picked up, no later than sixty days after the end of each semi-annual period in which the monitoring was performed.

(2) A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 760/93, s. 35.

AOX PROGRESS REPORTS

36. (1) On or before December 31, 1994, each discharger for which a limit for AOX is listed in Columns 3 and 4 of Schedule 2 shall submit a report to the Director outlining the steps taken at the discharger's plant to meet, on or before December 31, 1995, the phase-two limits that are specified for the parameter and the plant in Columns 3 and 4 of Schedule 2.

(2) On or before December 31 in each of the years 1996, 1997 and 1998, each discharger for which a limit for AOX is listed in Columns 3 and 4 of Schedule 2 shall submit a report to the Director outlining the steps taken at the discharger's plant to meet, on or before December 31, 1999, the phase-three limits that are specified for the parameter and the plant in Columns 3 and 4 of Schedule 2.

(3) A discharger is not required to submit a report under this section if the discharger has met the AOX limit that is the subject of the report for a period of twelve months preceding the date on which the discharger is required to submit the report. O. Reg. 760/93, s. 36.

AOX ELIMINATION REPORTS

37. (1)-(3) REVOKED: O. Reg. 645/98, s. 3.

(4) On or before January 31 in each of the years 2000 and 2001, each discharger for which a limit for AOX is listed in Columns 3 and 4 of Schedule 2 shall submit a report to the Director that sets out the following information:

1. A detailed description of any additional methods to those described in any previous report prepared under this section, by which AOX generated from the bleaching of pulp at the discharger's plant could be eliminated by the year 2002.
2. An evaluation of the technical feasibility of implementing at the discharger's plant each additional method described under paragraph 1, and an identification of which methods are technically feasible.
3. The timetable that would be required to implement each method identified as technically feasible under paragraph 2 and each of the stages involved in the implementation of each method.
4. An estimate of the financial cost to the discharger of implementing each method identified as technically feasible under paragraph 2.
5. A re-evaluation, where necessary, of the technical feasibility of implementing at the discharger's plant any method identified as technically feasible in any previous report prepared under this section, and a description of the factors that have contributed to the need for the re-evaluation.
6. The amount of AOX that was generated at the discharger's plant during the previous calendar year, and the manner in which that amount was calculated.

(5) In describing, for the purposes of a report prepared under this section, the methods by which AOX generated from the bleaching of pulp at the discharger's plant could be eliminated by the year 2002, the discharger shall consider,

(a) any methods that substitute other chemical or biochemical agents for chlorine and chlorine compounds for the purpose of bleaching pulp; and

(b) how products that are produced at the discharger's plant could be redesigned so as to eliminate the need for the use of chlorine or chlorine compounds in the discharger's bleaching processes and operations. O. Reg. 760/93, s. 37 (4, 5).

REVIEW OF AOX REPORTS

38. A report submitted under section 37 shall be reviewed by the Ministry in relation to its goal of eliminating the generation of AOX at dischargers' plants by the year 2002, taking into account any relevant environmental, technological and economic considerations. O. Reg. 760/93, s. 38.

PART VIII.1
DELAYED APPLICATION OF PARTS IV, V AND VI

38.1 (1) A discharger for the Thunder Bay Packaging Inc. plant need not comply with any requirement of Part IV until January 31, 1997.

(2) A discharger for the Thunder Bay Packaging Inc. plant need not comply with any requirement of Parts V and VI until December 20, 1995. O. Reg. 521/95, s. 14.

39. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 760/93, s. 39.

40. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 760/93, s. 40.

SCHEDULE 1
LIST OF REGULATED PLANTS

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Plant	Location	Owner as of September, 1993
Abitibi-Price Inc., Fort William Division	Thunder Bay	Abitibi-Price Inc.
Abitibi-Price Inc., Iroquois Falls Division	Iroquois Falls	Abitibi Price Inc.
Avenor Inc. (formerly: Canadian Pacific Forest Products)	Dryden	Avenor Inc.
Avenor Inc.(formerly: Canadian Pacific Forest Products)	Thunder Bay	Avenor Inc.
Beaver Wood Fibre Company Ltd.	Thorold	Beaver Wood Fibre Company Ltd.
Domtar Inc., Containerboard Division, Red Rock	Red Rock	Domtar Inc.
Domtar Inc., Containerboard Division, Trenton	Trenton	Domtar Inc.
Domtar Inc., Fine Papers Division, Cornwall	Cornwall	Domtar Inc.
Domtar Inc., Fine Papers Division, St. Catharines	St. Catharines	Domtar Inc.
E.B. Eddy Forest Products Ltd., Espanola	Espanola	E.B. Eddy Forest Products Ltd.
E.B. Eddy Forest Products Ltd., Ottawa	Ottawa	E.B. Eddy Forest Products Ltd.
James River-Marathon Ltd.	Marathon	James River-Marathon Ltd.
Kimberly-Clark Canada Inc., Huntsville	Huntsville	Kimberly Clark of Canada Inc.
Kimberly-Clark Canada Inc., St. Catharines	St. Catharines	Kimberly Clark of Canada Inc.
Kimberly-Clark Canada Inc., Terrace Bay	Terrace Bay	Kimberly Clark of Canada Inc.
MacMillan Bloedel Ltd.	Sturgeon Falls	MacMillan Bloedel Ltd.
Malette Kraft Pulp and Power Company	Smooth Rock Falls	Malette Inc.
Provincial Papers Inc.(formerly: Abitibi Price Inc., Provincial Papers Division)	Thunder Bay	Provincial Papers Inc.
QUNO Inc.	Thorold	QUNO Inc.
Rainy River Forest Products Inc.(formerly: Boise Cascade Canada Ltd.)	Fort Frances	Rainy River Forest Products Inc.
Rainy River Forest Products Inc..(formerly: Boise Cascade Canada Ltd.)	Kenora	Rainy River Forest Products Inc.
St. Marys Paper Inc.	Sault Ste. Marie	St. Marys Paper Inc.
Sonoco Limited	Trenton	Sonoco Limited
Spruce Falls Inc.	Kapuskasing	Spruce Falls Inc.
Strathcona Paper Company	Napanee	Roman Corporation Inc.
Thorold Specialty Papers (formerly: Noranda Forest Products Inc., Recycled Papers)	Thorold	Noranda Forest Inc.
Thunder Bay Packaging Inc.	Thunder Bay	Thunder Bay Packaging Inc.

O. Reg. 521/95, s. 15.

SCHEDULE 2
PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

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PLANT: Abitibi-Price Inc., Fort William Division

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	4280	2140
6	Total Phosphorus	W	120	72.8
8	Total Suspended Solids (TSS)	D	5740	3370
16	Chloroform	W	1.59	0.805
17	Toluene	W	0.0920	0.0920
20	Phenol	W	0.177	0.177
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Abitibi-Price Inc., Iroquois Falls Division			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	9060	4530
6	Total Phosphorus	W	254	154
6	Total Suspended Solids (TSS)	D	12100	7130
16	Chloroform	W	3.37	1.70
17	Toluene	W	0.195	0.195
20	Phenol	W	0.374	0.374
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Avenor Inc., Dryden			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	W	14900	7470
6	Total Phosphorus	W	418	254
6	Total Suspended Solids (TSS)	D	20000	11700
16	Chloroform	W	5.55	2.81
17	Toluene	W	0.321	0.321
20	Phenol	W	0.617	0.617
33	Adsorbable Organic Halide - Phase-one	W	3030	2350
	- Phase-two	W	1810	1410
	- Phase-three	W	968	752
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Avenor Inc., Thunder Bay			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	28400	14200
6	Total Phosphorus	W	796	483
6	Total Suspended Solids (TSS)	D	38100	22400
16	Chloroform	W	10.6	5.34
17	Toluene	W	0.611	0.611
20	Phenol	W	1.17	1.17
33	Adsorbable Organic Halide - Phase-one	W	4670	3620
	- Phase-two	W	2800	2170
	- Phase-three	W	1490	1160
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Beaver Wood Fibre Company Ltd.			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	2030	1010
6	Total Phosphorus	D	56.6	34.4
6	Total Suspended Solids (TSS)	D	2690	1590
16	Chloroform	W	0.753	0.378
17	Toluene	W	0.0746	0.0746
20	Phenol	W	0.0833	0.0833
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: Domtar Inc., Containerboard Division, Red Rock

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	9760	4880
6	Total Phosphorus	W	273	166
8	Total Suspended Solids (TSS)	D	13100	7680
16	Chloroform	W	3.63	1.83
17	Toluene	W	0.210	0.210
20	Phenol	W	0.403	0.403
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: Domtar Inc., Containerboard Division, Trenton

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	2490	1240
8	Total Phosphorus	W	69.6	42.3
8	Total Suspended Solids (TSS)	D	3310	1950
16	Chloroform	W	0.927	0.465
17	Toluene	W	0.0918	0.0918
20	Phenol	W	0.102	0.102
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: Domtar Inc., Fine Papers Division, Cornwall

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	8460	4230
6	Total Phosphorus	W	237	144
6	Total Suspended Solids (TSS)	D	11300	6660
16	Chloroform	W	3.15	1.59
17	Toluene	W	0.182	0.182
20	Phenol	W	0.349	0.349
33	Adsorbable Organic Halide - Phase-one	W	2170	1680
	- Phase-two	W	1300	1010
	- Phase-three	W	694	538
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: Domtar Inc., Fine Papers Division, St. Catharines

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	1140	570
6	Total Phosphorus	W	31.9	19.4
6	Total Suspended Solids (TSS)	D	1520	896
16	Chloroform	W	0.425	0.214
17	Toluene	W	0.0421	0.0421
20	Phenol	W	0.0470	0.0470
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: E.B. Eddy Forest Products Ltd., Espanola

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	12200	6080
6	Total Phosphorus	W	340	207
6	Total Suspended Solids (TSS)	D	16300	9570
16	Chloroform	W	4.52	2.29
17	Toluene	W	0.261	0.261
20	Phenol	W	0.502	0.502
33	Adsorbable Organic Halide - Phase-one	W	3920	3040
	- Phase-two	W	2350	1820
	- Phase-three	W	1250	973
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: E.B. Eddy Forest Products Ltd., Ottawa

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	1050	521
6	Total Phosphorus	W	29.2	17.7
8	Total Suspended Solids (TSS)	D	1390	818
16	Chloroform	W	0.388	0.195
17	Toluene	W	0.0385	0.0385
20	Phenol	W	0.0430	0.0430
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: James River-Marathon Ltd.

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	5330	2670
6	Total Phosphorus	W	149	90.6
6	Total Suspended Solids (TSS)	D	7140	4190
16	Chloroform	W	1.98	1.00
17	Toluene	W	0.115	0.115
20	Phenol	W	0.220	0.220
33	Adsorbable Organic Halide - Phase-one	W	1720	1330
	- Phase-two	W	1030	800
	- Phase-three	W	549	426
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Kimberly-Clark Canada Inc., Huntsville			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	689	343
6	Total Phosphorus	W	19.2	11.7
8	Total Suspended Solids (TSS)	D	916	539
16	Chloroform	W	0.256	0.129
17	Toluene	W	0.0254	0.0254
20	Phenol	W	0.0283	0.0283

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day

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PLANT: Kimberly-Clark Canada Inc., St. Catharines

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	823	410
6	Total Phosphorus	W	23.0	14.0
8	Total Suspended Solids (TSS)	D	1090	644
16	Chloroform	W	0.306	0.154
17	Toluene	W	0.0303	0.0303
20	Phenol	W	0.0338	0.0338
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: Kimberly-Clark Canada Inc., Terrace Bay

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	13700	6860
6	Total Phosphorus	W	384	233
6	Total Suspended Solids (TSS)	D	18400	10800
16	Chloroform	W	5.10	2.58
17	Toluene	W	0.295	0.295
20	Phenol	W	0.567	0.567
33	Adsorbable Organic Halide - Phase-one	W	4420	3430
	- Phase-two	W	2650	2060
	- Phase-three	W	1410	1100
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: MacMillan-Bloedel Ltd.

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	1760	876
6	Total Phosphorus	W	49.1	29.8
6	Total Suspended Solids (TSS)	D	2340	1380
16	Chloroform	W	0.653	0.328
17	Toluene	W	0.0647	0.0647
20	Phenol	W	0.0722	0.0722
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Malette Kraft Pulp and Power Company			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	4150	2080
6	Total Phosphorus	W	116	70.6
8	Total Suspended Solids (TSS)	D	5560	3270
16	Chloroform	W	1.54	0.780
17	Toluene	W	0.0892	0.0892
20	Phenol	W	0.171	0.171
33	Adsorbable Organic Halide - Phase-one	W	1340	1040
	- Phase-two	W	801	623
	- Phase-three	W	427	332
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Provincial Papers Inc.			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	4890	2450
6	Total Phosphorus	W	137	83.1
6	Total Suspended Solids (TSS)	D	6550	3850
16	Chloroform	W	1.82	0.919
17	Toluene	W	0.105	0.105
20	Phenol	W	0.202	0.202
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	QUNO Inc.			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	10500	5270
6	Total Phosphorus	W	295	179
8	Total Suspended Solids (TSS)	D	14100	8290
16	Chloroform	W	3.92	1.98
17	Toluene	W	0.226	0.226
20	Phenol	W	0.435	0.435
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: Rainy River Forest Products Inc., Fort Frances

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	11500	5760
8	Total Phosphorus	W	322	196
8	Total Suspended Solids (TSS)	D	15400	9060
16	Chloroform	W	4.28	2.16
17	Toluene	W	0.247	0.247
20	Phenol	W	0.475	0.475
33	Adsorbable Organic Halide - Phase-one	W	1970	1530
	- Phase-two	W	1180	917
	- Phase-three	W	629	489
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT: Rainy River Forest Products Inc., Kenora

ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	10600	5290
6	Total Phosphorus	W	296	180
6	Total Suspended Solids (TSS)	D	14200	8320
16	Chloroform	W	3.93	1.99
17	Toluene	W	0.227	0.227
20	Phenol	W	0.437	0.437
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	St. Marys Paper Inc.			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	6290	3150
6	Total Phosphorus	W	176	107
8	Total Suspended Solids (TSS)	D	8430	4950
16	Chloroform	W	2.34	1.18
17	Toluene	W	0.135	0.135
20	Phenol	W	0.260	0.260
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Sonoco Limited			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	1660	826
6	Total Phosphorus	W	46.3	28.1
6	Total Suspended Solids (TSS)	D	2200	1300
16	Chloroform	W	0.616	0.310
17	Toluene	W	0.0611	0.0611
20	Phenol	W	0.0682	0.0682
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Spruce Falls Inc.			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit kg/day	Monthly Average Plant Loading Limit kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	11000	5480
6	Total Phosphorus	D	307	186
6	Total Suspended Solids (TSS)	D	14700	8630
16	Chloroform	W	4.08	2.06
17	Toluene	W	0.236	0.236
20	Phenol	W	0.453	0.453
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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PLANT:	Strathcona Paper Company			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	1270	631
6	Total Phosphorus	W	35.4	21.5
6	Total Suspended Solids (TSS)	D	1680	992
16	Chloroform	W	0.471	0.237
17	Toluene	W	0.0467	0.0467
20	Phenol	W	0.0521	0.0521
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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Thorold Specialty Papers				
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 day)	D	1650	826
6	Total Phosphorus	D	23.4	14.3
6	Total Suspended Solids (TSS)	D	2200	1300
16	Chloroform	W	0.616	0.310
17	Toluene	W	0.0611	0.0611
20	Phenol	W	0.0682	0.0682
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzofuran	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

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Plant:	Thunder Bay Packaging Inc.			
ATG	Parameter	Monitoring Frequency	Daily Plant Loading Limit	Monthly Average Plant Loading Limit
			kg/day	kg/day
	Column 1	Column 2	Column 3	Column 4
1A	Biochemical Oxygen Demand (5 Day)	D	1752	873
6	Total Phosphorus	W	24.75	15.06
6	Total Suspended Solids (TSS)	D	2328	1371
16	Chloroform	W	0.651	0.327
17	Toluene	W	0.0645	0.0645
20	Phenol	W	0.0720	0.0720
24	2,3,7,8-Tetrachlorodibenzo-para-dioxin	Q		
	2,3,7,8-Tetrachlorodibenzo-furan	Q		
	TEQ	Q		

Explanatory Notes:

D = Daily monitoring requirement
W = Weekly monitoring requirement
Q = Quarterly monitoring requirement
ATG = Analytical Test Group
kg/day = Kilograms per day
TEQ = Total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners

O. Reg. 521/95, s. 15.

SCHEDULE 3
COOLING WATER ASSESSMENT MONITORING

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PLANT:	All Plants	
ATG	Parameter	Monitoring Frequency
	Column 1	Column 2
5a	Dissolved Organic Carbon (DOC)	W
8	Total Suspended Solids (TSS)	W

Explanatory Notes:

W = Weekly monitoring requirement
ATG = Analytical Test Group

O. Reg. 521/95, s. 15.

SCHEDULE 4
REFERENCE PRODUCTION RATES

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Plant	Reference Production Rate	
	Bleached Pulp	Finished Product
	tonne/day	tonne/day
Abitibi-Price Inc., Fort William Division		179
Abitibi-Price Inc., Iroquois Falls Division		629
Avenor Inc., Dryden	940	1493
Avenor Inc., Thunder Bay	1449	2842
Beaver Wood Fibre Company Ltd.		347
Domtar Inc., Containerboard Division, Red Rock		846
Domtar Inc., Containerboard Division, Trenton		427
Domtar Inc., Fine Papers Division, Cornwall	673	846
Domtar Inc., Fine Papers Division, St. Catharines		196
E.B. Eddy Forest Products Ltd., Espanola	1216	1216
E.B. Eddy Forest Products Ltd., Ottawa		179
James River-Marathon Ltd.	533	533
Kimberly-Clark Canada Inc., Huntsville		118
Kimberly-Clark Canada Inc., St. Catharines		141
Kimberly-Clark Canada Inc., Terrace Bay	1372	1372
MacMillan-Bloedel Ltd., Sturgeon Falls		301
Malette Kraft Pulp and Power Company	340	415
Provincial Papers Inc., Thunder Bay		346
QUNO Inc., Thorold		1053
Rainy River Forest Products Inc., Fort Frances	611	1151
Rainy River Forest Products Inc., Kenora		1057
St. Marys Paper Inc., Sault Ste. Marie		629
Sonoco Limited, Trenton		284
Spruce Falls Inc., Kapuskasing		1096
Strathcona Paper Company, Napanee		217
Thorold Specialty Papers		284
Thunder Bay Packaging Inc., Thunder Bay		300

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